

THE TRI-STATE AMATEUR RADIO SOCIETY



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MAY 1948

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TRI-STATE SPARKIES,
Tri-State Amateur Radio Society,
Clifford C McGuyer, W9DGA, Editor,
1321 South Governor Street,
Evansville, 13, Indiana.

Meeting 28 May 48
Don't forget
T.O.

Well fellows, here it is. I hope you will enjoy reading your new magazine, TS. It was a lot of work, but if the majority like and support this magazine, it will be worth all the added work. I would like to get your reaction. If you like or dislike it, please send me a letter or postcard giving your views.

First, I would like to thank persons submitting articles for publication in TS. If at any time you feel you have a good idea, write it up and send it to me for publication. It may be either of a technical nature or a light drama of our hero, saving his community from a disaster. It's up to all of you for the articles. Get your's rolling, NOW. Resolve that you will have at least one article published this year in TS. Send reports of DX to the DX Editor, and reports of VHF activities to the VHF Editor, ect. Send any information as to what you are doing--new antenna, transmitter, ect. If you have a pet gripe or peve, send a letter to "Letters to the Editor". Space will be made available to all officers, directors and committee chairmen for any information they might like to pass on the general membership.

For those interested, advertising space is available at a cost of seventy-five cents per column inch. So fellows it's up to you to keep things rolling, get your articles in for publication, NOW.

C.C.M.

"AS I SEE IT"

By Fay Gehres, W9AIN, Pres. TARS

Mid May finds the Society ready to shift into high gear for outdoor activity. With Field Day only a month away the portable equipment is being set up and tested, and from all indications the score in this territory will increase for '48. Treasure hunts are also in order. Both Owensboro and the Tell City-Canelton gangs are moving so its "Hi-Time" we start here. Think it over, we have competition up east. Then to its picnic time again and from last years experience this is a must. Nothing can replace these "all family" meetings with games.

I heard on of the gang say the auction was a three ring circus, but I counted eight auctioneers. The Society's permanent housing fund was launched by several pieces of the folding variety. Nobody went broke and everyone had fun especially when one auctioneer yells going one, going two, going three, going four, going five-----

"YOUR SECRETARY"

By Vic Chamberlin, W9BBC.

I wish to take this opportunity on behalf of the Society to welcome the new members, W9MRR, W9ERN, and K9AAD. Hope you enjoy our Society and help us make it a worthwhile organization.

I would appreciate any member who has change of address to notify me so I can make the correction on the list. I have word from G Wiley that Bud Radio will furnish free of charge, badges with your call on it, for use at Society meetings, ect. We still have a supply of membership stationery on hand for sale to Society members.

If you have any news you wish to get in TS or QST, mail or phone it to me before the tenth of the month. Any of the local ham parts dealers will be glad to take any news items also. I have endeavored very hard this month for news and believe you me, "Taint-Easy", McGee.

INTRODUCING THE FRANKLIN OSCILLATOR

By Paul Robbiano, W9NEC ex W6PKM.

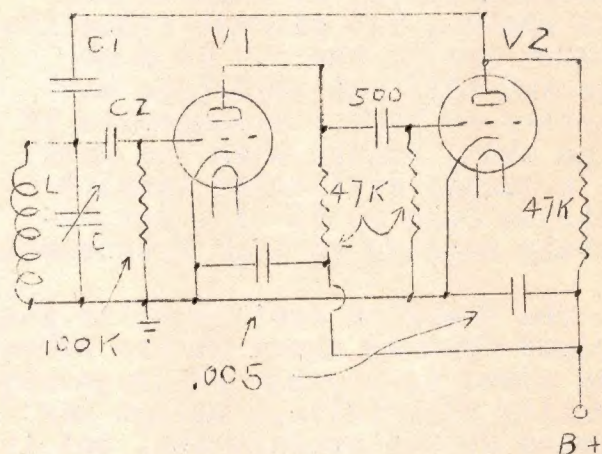
A spin of the receiver dial over any of the cw bands will usually reveal a great number of "bloopy" and "chirpy" signals which seem typical of the average VFO. While it is true that many such signals may be blamed on hastily modified surplus equipment never intended for cw work, a great many others are the result of hastily thrown together ECO's.

Just what causes "chirpy" or "bloopy" notes in the average VFO is a problem meriting careful study, since there are plenty of excuses a vacuum tube and an L-C can find for acting belligerent when turned loose in any of our ham bands.

Even under ideal laboratory conditions the design of an ECO, which has become the standard VFO for amateur use, presents many problems. First of all a good voltage regulated power supply is mandatory for good results. Then comes the requirement of an extremely high C tank circuit, a parallel resonant circuit possessing in many cases an effective capacity several hundred times greater than the tube inter-electrode capacities which may act to change the resonant frequency of the tank circuit. The idea behind this circuit feature is to concentrate so much capacity in the resonant circuit itself that tube electrode capacities appearing across the tank circuit will be a negligible portion of the total tank capacity. This being the case, one might expect that changes in tube inter-electrode capacities with heating and so on would have a minor effect on oscillator frequency. To some extent this is true, and if good ECO stability is desired a high C tank circuit is a must. This rule of design must also be followed in all other VFO circuits popular in

amateur circles. Various means are used to obtain high C, and anything from old broadcast condensers to relatively expensive zero temperature coefficient fixed condensers may be found in the usual VFO. The fact that high C has preached to the ham fraternity these many years as a criterion for oscillator stability, might mean that quite a bit of interest could be aroused by introducing a relatively simple oscillator of extreme frequency stability which operates with an extremely low C tank circuit.

Such an oscillator has innocently appeared many years in the ARRL Handbook labeled "The Franklin Master-Oscillator". A schematic of this oscillator circuit in its simplest form is shown below.



Voltage of proper phase to maintain oscillation is obtained from the output of a simple resistance coupled amplifier triode V2. In fact the oscillator may be looked upon as a two stage amplifier which is intentionally coaxed into controlled overall oscillation, by the feedback capacitor C1. The frequency of oscillation is then controlled by the tank circuit LC. For best results and greatest stability this tank circuit is low C, about 70 mmfd or so to tune to 3.5 mc. Any attempt to increase this tank capacity appreciably will result in a mod-

Franklin Oscillator, Cont'd.

ulated note and eventually lack of oscillation.

Typical values for C1 and C2 range from 1 mmfd to 5 mmfd, the smallest possible values that will maintain oscillation will give the best frequency stability. Herein lies the "tale"!! Notice that the LC circuit is working with what amounts to almost no load!! Except for a 1 or 2 mmfd condenser, it is isolated from the oscillator tube. In sharp contrast to the ECO the Franklin oscillator achieves remarkable stability with a conventional low C tank circuit by extreme isolation from the oscillator tube rather than by heavy capacitive loading of the tank circuit.

The circuit shown will work with conventional double triode tubes such as the 6J6 or the 6SN7 at frequencies up to 5 mc or so. As it stands, the circuit finds its greatest use in the 3.5 to 5 mc range and will not oscillate satisfactory at higher frequencies if for no other reason than the fact that a simple resistance coupled amplifier such as V2 will not adequately amplify at high frequencies.

The Franklin oscillator in its simplest form as shown in the schematic above is capable of frequency stability with voltage change far superior to the average ECO, but it must be born in mind that it is not a power oscillator. Output voltage from the oscillator shown is from 3 to 5 volts, an amount sufficient to drive a 6AC7 class A amplifier. Although the idea of keying this oscillator hasn't as yet been fully exploited, the results so far, obtained by keying the cathode of the first triode, are very encouraging. An improved version of this same oscillator, utilizing some of the advantages of electron coupled power output has already been constructed in haywire form. Preliminary tests on this oscillator indicated a frequency change of 50 cycles or less at 3.7 mc with changes in

plate power supply voltage from 100 to 400 volts!!!!

A low power 80 meter exciter using this oscillator is now under construction. It is hoped that the finished unit will provide a truly simple VFO possessing frequency stability and keying characteristics approaching that of a good crystal oscillator all of this with a low C tank Circuit!

"THE SAGA OF JERRY'S FIVE"

or

"Why no Six Meter QSO"

As told to the Editor

All last month Jerry Craig, W9HGJ was listening and calling CQ's on six meters every chance he got. But for some reason Jerry just couldn't hear or work anything. Then, it happened, he heard four or five W5's. He says to himself, boy, Jerry's in, or so he thought. So he tunes the band and all W5's are working someone, so he calls CQ. Yes someone answers his CQ. W9HGJ, W9HGJ, ect for about 50 times, then

this is W5G%\$#whooooosh. You guessed it, the band dropped out and no QSO. CQ CQ CQ 6 meters this is W9HGJ. Still no QSO.

According to Dick Anderson's Sport column in the Press, Lefty Covert, W9KVE would be a good pitcher for the local Police ball club. I Guess Dick didn't see the phone-CW ball game at last years Society picnic at Camp PaHoka, where the CW men murdered the Covertites with him on the mound as "Chief Hurler", on then president Hatfield's (W9GFS) long double to drive in the winning runs.

VHF May QSO Party.....May 22-23
ARRL Field Day.....June 12--13
ARRL Code Tests...June 21, July 14
TARS Meeting.....May 28
"SWITCH TO SAFETY"

"MOBILE NEWS AND VIEWS"

By Jack Grimes, W4LLR

Most of the fellows who have tried mobile operating have developed a permanent case of "Mobileitis" and have made a mobile station a must. This column will be devoted to: 1 promoting and encouraging the construction and operation of mobile equipment. 2 reporting the activity and DX of various mobile stations. 3 presenting hints and kinks contributed by the fellows, including articles by members of the Society. 4 promoting the organization of an emergency mobile net to include fixed control stations. (With the Cooperation of the local EC).

Quite possibly there is more activity than most of the fellows realize. Mobile rigs operating at present include W9KMI and ANG of Mt Carmel, W4QDZ of Owensboro and W4LLR of Henderson. Rigs under construction include W9MJW and W4NJE. There are probably others, if so pardon us for no mention and let us know for next month's column. Eight rigs in operation and more under construction is really a swell start. Come on gang and lets make it at least 25 before the summer is over.

Emergency communication can be maintained over the entire Tri-State area under all conditions without being dependent on regular power. Another enjoyable mobile pastime is a group mobile outing--picking a destination some 50 or so miles distant for a picnic, and all units proceeding at a prearranged time by different routes and maintaining contact with each other all the way. The opportunities for skip and DX on 10 meters is as good with a mobile as with a fixed station. Very good results have been obtained from this area. According to W4ERH on mobile W5 got a 5-9 from a VK.

So fellows that is a mark to shoot at. Let's all pool our information and get on the ball. Let's have one of the country's finest mobile nets. The cost is low(it says here, Ed) and the results are good, so lets go GANG!!!! If you are mobile or intend to go mobile, please contact me in person, over the air, by twisted pair, or by mail with any or all information for this column.

ARRL Bulletin to all amateurs.

Effective immediately the band of 220 to 225 mc is opened by FCC for ham use replacing our temporary 235 to 240 mc band. However amateurs who wish to do so may continue to use 235 to 240 mc till 8 June 1948.

ARRL Bulletin to all amateurs.

You are reminded that regulations forbid amateur stations to handle third party international traffic except where special arrangements have been made. US Amateurs may handle such messages with Canada, Chile and Peru, provided they are of character that normally would not be sent by existing means of electrical communications. Traffic may be freely handled with outlying licensed by FCC, also with KZ5 stations and those operated by US military personnel anywhere in the world under regulations prescribed by military theatre commands. Amateurs who have occasion to handle overseas traffic should review information on international traffic handling on page 32 of April QST.

"STARVED ROCK HAMFEST"

The Starved Rock Radio Club will have a Hamfest 6 June 1948 near Starved Rock State Park, Illinois. A Gala event is planned. For further information contact W9MKS.

Articles are due by 15 June

"YOUR EMERGENCY COORDINATOR"

By Charles Long, W9AZU

I am anxious to get an emergency practice net functioning on 10 meters and all who are interested in participating drop me a line. For a start at least, it is planned to just report in to the Net on a predetermined schedule and then, if no traffic the fellows can proceed with rag chewing or whatever they desire. First practice "report in" session is planned for Tuesday 8th June at 9 PM. So all you fellows who are interested, please let me know so I can develop a list to call for a "report in" on the first and subsequent practice sessions.

I would very much appreciate your sending information on any portable or mobile transmitting equipment you may have which could be placed in operation on short notice in the event of a disaster or emergency. Such information as power, frequency and whether CW or fone should be listed. Also, don't forget to let me know if you have, or know of, any emergency power supply equipment such as gas engine driven generators, their rating, ect., which could be pressed into use if the emergency should arise.

It is well to know all these things before hand and be prepared rather than wait until the emergency arises and then hurry around trying to get the information and lose valuable time.

This portion of the Society's activity can succeed only to the extent that we all cooperate, so please give me a hand by turning in all such information as you have.

As a result of "skin effect" it is necessary to generalize the concept of resistance when dealing with radio frequencies by considering the resistance to be that quantity which when multiplied by the square of the current will give the energy dissipated in the circuit.

June 12th-13th ARRL "FD"

'Tis time now to plan for testing of all portable and emergency gear in this activity dedicated to preparedness. Clubs and groups will receive usual QST listings depending on number of transmitter groups in operation at the same time. Individual call listing will be given for participation on an individual basis of one or two(not more) operators.

Lets give our gear a tryout even just a 6L6 oscillator and eight watts and ten QSO's to prove that we can set it up on batteries or other emergency power and establish communication. Just as we might be called on to do if a big wind wiped out all the power lines! See April QST for complete information.

ARRL Bulletin to all Amateurs

The ARRL Board of Directors in annual meeting after full examination of national and divisional polls of opinion and deliberation on frequency requirements, requested FCC to consider the following recommendations for regulatory changes. 1 Fifty kc extension of 75 meter US phone. 2 Making permanent provisions authorizing NFM in the lower 50 kc segments of the 75 and 20 meter phone bands. 3 Modifying the 50 mc band provisions to assign first 100 kc of band to A1, to permit NFM wherever A3 is used and AØ duplex above 51 mc. 4 To require NEW applicants for class A license to receive a code examination at 16 wpm as well as the usual technical exam to give this grade renewed meaning and respect. 5 To require new amateurs to limit their voice operation to frequencies above 50 mc for a period of one year at same time freely permitting cw work in all bands and with remaining class B bands to come after a years operation. The Board urges all amateurs using AM, FM, and PM below 14.4 mc to employ means to limit sidebands to three (3) kcs.

"ABOVE 50 MC"

By Ralph Barnett, W9UIA

The time for planning to get on 6 or 2 is over. Now is the time to get going--and fast. The high frequency bands are following their usual patterns so far this year. The ten meter band goes first dead for W6's then dead for DX, short skip stations begin to show up. Then watch the 6 meter band.

The last part of April we had an opening to W5's in Texas. Morning of May 8 heard a station in Wisc. Then May 9 the 6 meter band was open about noon to W1's and W2's. (We are still looking for Vermont up that way).

If the band acts like last year, we can expect a shorter time lapse between openings in the future. In June, July and August of last year, the six meter band was open quite often.

Interest in 6 and 2 is still on the increase. Four stations are now on 6 with another expected soon. A few fellows are planning to build 2 meter transceivers soon.

We have been listening quite a bit on 2 this last week and have heard the 5th harmonic of four local 10 meter stations Q5 S 2 to 8. Some of these fall outside the 2 meter ham band, others in aircraft and other bands. Since the FCC has gotten tough on harmonics with some of the boys, recent QST articles have given methods of reducing them. Our BC 645 is still gathering dust waiting for somebody to get going on 420 mc.

A "May Party" for VHF workers starts Sat May 22nd (2 PM local standard time) and ends at midnight local standard time Sun May 23rd. ARRL certificates to section winners. No cross band work; all operation above 50 mc. See details in May QST. See you all then.

W9EHU is rebuilding the RF and Osc sections of his Breating.

"STATION ACTIVITIES"

By Vic Chamberlin, W9BBC

W9AZU has had several nice QSO's with the Hallicrafters expedition. W4LLR has just returned from a trip to Wash DC, and made 90 contacts, including XE1 and 2 KP4's. While in DC he worked W9MDX with good signal strength..W9FON/4 has a new rig on 10 phone but is having speech trouble..W9GWL (Griffin's Mayor) is moving to the farm and is still planning to put up that 8JK for 75 phone.. Power house Casey, W9KBA is still carrying his eggs from the Chicken house via a wheel barrel(he's the man who invented the chicken you know) he's slipping tho, only had to replace 10 antenna coils for the BCI's this month..W9JEU is still playing golf...W9KMI is building new rig..W9RDJ is building new 3 element beam..anyone seen W9GCR lately??..Why is W9MRR worried after QSO with that W5?.. W9MLL has a new mobile rig and new stainless steel antenna for it..W9UNI runs 650 watts on 10-75 meters..When are you coming to a meeting John?..W9UNT and W9DGA have new Kaizers..Earl was heard testing new low power rig, R7 out here Earl.Are you going to put it in your car?..W9AMZ is off air moving rig across the room.W9WBW got his WAC and 3 element beam.. W9FAK is doing good with his DX. W9PNE is the DX man from his parts with 44 countries worked.. PNE is also working on a six mtr beam, will work in the coming VHF contest..W9EHL has not been on lately..John has been in the Hospital, speedy recovery, John,... W9ZHX is moving to new location. W9BBC had contact with W1HPR one of the Hq gang..Vic told of our Society's activities..New Ham in town W9DDV, runs 90 watts on 10 fone..W9NVN the college station has new beam rotator..following taken Class A exams W4PKX, W4JVB, W4LUB and W4ERH..W9QLW building new control box..W9GFO on Vacation..W9BAX on 40 cw..W9UIA has 32 states on 50 mc.W9AIN on 80cw.

"EMERGENCY"

By Harold McClellan, W9WNM
State Emergency Coordinator

Your local EC is Charles Long W9AZU. He will handle all matters in connection with AEC. Please give him your cooperation. Let's be ready if disaster overtakes us.

I urge each and every one of you to operate in the coming ARRL Field Day.

Next month, a complete description of the Indiana Emergency organization will be outlined.

"TEN METER FORECAST FOR JUNE"

By Neff Cox, Jr., W9MDX.

From about 14:00 GCT until about 00:00GCT communication with the Caribbean area and Central America will be the most reliable. Sporadic openings into South America will occur from time to time during the opening. New Zealand may show up within the last 3 hours of the opening. Sporadic E may be expected during various times of the day.

Starting with May and continuing thru September 1948, the maximum usable frequency will be below 30 mc at all times of the day over paths at approximately 40 degrees North Latitude. Evansville is at 38 degrees North.

FCC has cancelled order 132 and 132A, restoring Secs 12.92 and 12.93 of our regulations. The effect is to abolish a requirement for notifying the District FCC Engineer when operating portable above 25 mc...and to establish that all amateurs moving permanent location APPLY IMMEDIATELY for modification and observe Secs 12.93A and C signing the portable indicator after their calls. Portable work on any frequency below 25 mc must of course follow FCC notification as always.

Your articles and news items for TS should be in by the tenth.

"NEXT MEETING"

T I M E

7:30 Central Standard Time
or
8:30 Central Daylight Savings Time

D A T E

28 May 1948

P L A C E

City Court Room, Evansville
Police Station, second floor.

P R O G R A M

Mr. Phillip Hatfield, W9GFS, of Engineering Services, Inc., a Technical Editor of TS, will talk on "Simple Portable Equipment". Mr Hatfield has worked in every ARRL Field Day since it was originated. Sample equipment will be on display for your inspection.

BRING YOUR FRIENDS

Hams using "10" should check their 4th and other harmonics, and insure full suppression of such in accord with Sec. 12.133. The FCC has had complaints that jamming the Airways Navigational channel (116.10 mc) has occurred from 29025 kc. 'phone transmissions. Since this is a joint military, airline, CAA channel, FCC urges all amateurs to refrain from any operating near 29025 kc until their equipment has had a most rigid check, and all steps taken to insure no interference to other VHF services can result.

The first 6-meter contact between South America and the Hawaiian Islands was made 12 Mar 8 pm EST when KH6PP worked LU9EV. Next day KH6PP worked CX3AA, then five W6's and 6 more LU's. Florida W4's have worked OA4AE OA4BG and LU7WA. When is W9UIA, Ralph going to work some good DX?

"L/C RATIO"

By John F Clemens, W9ERN.

The proper choice of LC ratio is of importance in many ham applications. Some confusion often arises in choosing the LC ratio to meet a specific need. For instance, the ARRL Handbook states that in a transmitter the tank circuit Q is proportional to the tank capacity. At the same time, many of us have noticed that the gain and selectivity of a receiver is often highest at the low capacity end of the dial, indicating high tuned circuit Q. This apparent contradiction may be understood by referring to the theory of parallel tuned circuits.

The impedance across a parallel tuned circuit at resonance is $Z = X_L Q = L/Cr$ where r is the resistance in series with the coil. Suppose that the tuned circuit is connected to the grid of a class A amplifier such as a receiver r.f. stage. Up to moderate frequencies, say 30 mc., such a connection causes practically zero resistive loading of the tuned circuit. The graph of Z versus frequency for the input circuit is therefore the same as the graph of the tuned circuit alone. If the LC ration is increased, we will increase L and r in the same proportion and decrease C. As a result, Z will be increased resulting in greater gain and selectivity.

The other important case occurs when a second resistance, R, shunts the tuned circuit. This is the case in a class C r.f. amplifier or in a broad-band I.F. amplifier which has resistors shunting the tuned circuits to broaden the response. If R is small compared to the resonant Z of the tuned circuit the resulting impedance due to Z and R in parallel will depend more on the magnitude of R than Z for a band of frequencies near the resonant frequency of the tuned circuit. If we desire to sharpen the response of

the tuned circuit (raise the effective Q) we can increase the value of R or decrease the LC ratio. If the LC ratio is decreased, the resonant Z of the tuned circuit will be reduced and when Z becomes lower in magnitude than R, the impedance function of the combination will be controlled primarily by the coil and condenser. The frequency response curve will therefore tend to follow the curve of the coil and condenser alone and be little altered by changes in R. This is the basis for the high-C tanks used in most VFO's.

It must be borne in mind that high Q is not always desirable. In a transmitter tank circuit, the tank efficiency is

$$\%E = [(Q_u - Q_l) / Q_u] 100$$

where Q_u is the unloaded Q and Q_l is operating Q with the load coupled. To avoid poor tank efficiencies it behooves us, therefore to first of all use good coils and condensers and insulation in our tank circuits and then couple the load tightly enough to reduce the loaded Q to the smallest tolerable value.

The limiting factor is the possibility of radiating harmonics and the Handbook recommends the familiar figure of 12 as a good value. The operating Q may be often reduced to as low as 5, however, with a consequent increase in tank efficiency, if the antenna has poor harmonic radiating properties.

With the UN amateur station K2UN, due on the air soon the transmissions addressed to amateurs that originated with the UN will be discontinued from WIAW. The plan of operation for the new K2UN will be passed along to amateurs as soon as announced from Lake Success, by the UN.

"SWITCH TO SAFETY"

"TEN METER MOBILE"

By Neff Cox, Jr., W9MDX.

Since the ten meter band offers good results with low power and the PE 103 dynamotors available at low cost, the feasibility of mobile operation is readily apparent. There are several in operation now, on ten meters in this area, but there is room for a lot more.

The best results in this area have been obtained by mobile W4LLR of Henderson, Ky., who on a recent trip to Washington DC rolled up 92 contacts including an XE and two KP4's. At least a third of those contacts can be attributed to the use of the dash controlled VFO which makes the unit extremely versatile. The local ground wave "solid coverage" is around 20 miles and can extended to about 30 miles by careful listening. Mobile contacts are very satisfactory and W4LLR has had solid contact with W9HAB between the Owensboro bridge and the Evansville-Henderson bridge.

In a night test with W9KMI and W9ANG contact was made between their mobile units and W9MDX while Kenny and Charlie were parked on high ground at Mt Carmel, Illinois.

Anyone interested in mobile operation can get a wealth of information from W4LLR, W9ANG, W9KMI, and W9MLL or anyone who has had experience with mobile units. Remember this tho--- half-way measures do not give results where mobile operation is concerned.

W9CVN has rebuilt power supply for his BC 459 A on one chassis. Jim now works for the Telephone Co. Jim also go his TP first.

"Humpty" Campbell will write a "Trading Post" column for TS. Give him all information on sale or trade items. He also has a 50 foot pole in his back yard.

"HOWS YOUR DX?"

By Earle Cartwright, W9QLW

Twenty meter DX has been spotty this past month. Usually when the band is open it means the W6's and W7's are like locals which means "tuff sledin". But if you can squeeze in between the W6's CQing DX you can find a few new ones hanging around. Some of the more faithful are VR5PL around 14,010; RV2/FO8 14,090; ZD1LQ 14,028; W0OZW/KS6 14,130; OX3BC 14,105. The usual times are from 11pm on.

Would also like to hear from any of the gang that are working rare ones on other bands than 20. Any DX on 80, 40, or 10?

W9HCF up at Newburg and W9PNE from Mt Carmel came up with their total countries worked. Any more of you DX hounds got your country list handy? How about getting in the column? Even if you are not a confirmed DX'er, I know lot of you fellows that chew the rag on ten, run across DX now and then, so how about your total, doesn't matter how many, ten or a hundred, send it in.

W9QLW and W9DGA are hot on the trail of ZD1LQ and RV2/FO8, who incidently is in the Society Islands, near the Cook Islands and is a "R A R E" one.

W9DGA came up with W0OZW/KS6 KM6AH, and HP1BR for three new countries; besides FA8JO, OA4CJ, PA0ZM, and the usual VK's and ZL's. W9QLW added HP1BR and W0OZW/KS6 for two new countries.

Here is the totals for May:

W9GFO	78
W9QLW	76
W9UIA	59
W9DGA	59
W9EHU	55
W9WNM	48
W9PNE	44
W9HCF	31

Get all your DX reports to me by the tenth of each month. Send your list today.

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June 1948

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Howard Campbell, SWL

Circulation
Dorothy E McGuyer

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TRI-STATE SPARKES, T S.
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Evansville 13, Indiana.

Next meeting,
25 June 1948.

To open, loosen this staple.

one

" A S I S E E I T "

By Fay Gehres, W9AIN, President TARS.

There are times when controversial questions must arise; some people will take an affirmative view, others a negative. Although both sides may have very good reasons to debate the question. We must abide by the decision of our elected representatives. Recently the ARRL Board of Directors at their annual meeting studied, debated, and proposed a number of new regulations. Individually we may agree or disagree with their judgment, but until we request and receive a report from our own Central Director, it is too early to condemn the Board's action.

Sometimes, before giving a question proper consideration, we are prone to expect everyone to view it exactly as we do. However, everyone has a right to his opinion regardless of whether it coincides with ours. Our Society, as a body has previously agreed not to enter controversial issues. Therefore, individual members or groups who may have dissenting views should respect the opinions of other Society members and Act Accordingly.

"YOUR SECRETARY"

By Vic Chamberlain, W9BBC.

As you all know the yearly subscription and membership to QST has been increased to \$4. per year. However club members will still be able to get QST for \$3.50. We will have to send a group of ten subscriptions at once, then any number may be added. I will be glad to send in your subscription and anyone wishing to renew subscriptions please contact me.

I have just received a letter from Charles Conway, W9FSG, the new SCM for Indiana. Mr Conway is very interested in our activity here and is open to sug-

gestions. He also informs me that Indiana is limited to 37 lines in QST news so he will do the best he can for us. He wants good DX reports so that Indiana will be represented there. (suggest he contact our DX Ed.-ED)

I have received some decals "High Voltage" which will be given to Society members at next meeting.

Tri-State Amateur Radio Society
Full Membership, licensed \$4. yr
Associate membership \$4. yr
Student membership licensed \$2. yr
or unlicensed.
All dues payable in advance,
by quarter, or by year.
Meetings last Friday of month.

"EMERGENCY"

By Harold McClellan, W9WNM 1
State Emergency Coordinator

No organization, whatever its nature, can long survive without good reason for its existence. Of course, all of us know there are many good reasons for the existence of amateur radio. However, the general public is probably acquainted only with our work in times of emergency. It is in this field that we get most of our favorable publicity. Therefore it is considered of the utmost importance to us, as hams, to extend, improve, and eventually perfect our emergency organization. Here is a golden opportunity for genuine public service. A very small part of your operating time is all that is needed to insure the success of this activity. In the coming battles to hold our frequencies the effectiveness of our emergency efforts will be carefully weighed and judged and will have an important effect upon the outcome.

Get in the AEC and help to justify your existence. Call Charles Long W9AZU and get the dope.

Your EC organization in Ind.

QIN Indiana's finest net.

Monday thru Friday 3656 kc
6:30 PM CDST.

North phone net 3905 kc

Tuesday and Thur 6:30 PCDST
Sunday 9:00 ACDST

South phone net 3890 kc

Tuesday and Thur 6:30 PCDST
Sunday 10:00 ACDST

Local or area nets operate on schedules set by local EC. Local EC's have outlet to state-wide CW and phone nets.

The State of Indiana is a "SECTION" in itself in the ARRL organization. In each Section there is an officer to supervise all emergency work. His title is Section Emergency Coordinator, three

or SEC. In each major area of the state the SEC, sometimes through affiliated clubs, appoints a local or area, Emergency Coordinator, or EC, who will supervise the work in his area and selects assistant EC's, who usually specialize in some certain phase of the work, such as field equipment, UHF, or mobile operation. Ass't EC's may also be appointed for certain bands. In areas served by affiliated clubs, the EC may be chosen by the club. The SEC and SCM will confirm such appointments, provided there be no conflict in jurisdiction. A monthly report is requested from each member to the EC, who completes reports and in turn reports to the SEC. All amateurs are invited to become members of the AEC. To join, report to your local EC (W9AZU). He will provide application blanks and membership cards and will give you your assignment, taking advantage of your existing equipment.

It is the policy of your emergency officers to use all existing equipment while promoting and encouraging the construction of specialized equipment for emergency use. Your attention is invited to the fine nation-wide recognition earned by the Amateurs of Oregon in the recent disaster at Vanport, Oregon and the Columbia river valley. Only good prior organization made this possible.

BE PREPARED. JOIN AEC

"STATION ACTIVITIES"

By Vic Chamberlin, W9BBC

W9MIO has obtained another call and location, W9EDO at Mt Carmel. W9UNT has gone mobile..W9UIA still going strong on six meters..... W9FON/4 got married-congrats-when are you going to get your license modified?...W9ENZ gone mobile.... W4LQV gone mobile..W9AZU rebuilding speech amplifier...W9MRR installing rotator and selsyns on beam..... W9JUJ active on 28 mc.

"SWITCH TO SAFETY"

"ABOVE 50 MC"

By Ralph Barnett, W9UIA, WQKB

True to expectations the six meter band was open quite a few times during the Month of May. The following openings were logged here.

May 1 W5's at 8:30 PM
May 9 W1's, W2's from 11 AM to noon
May 10 VE2's at 8 PM
May 13 VE2's at noon, W1's, VE1's, and VE2's at 6 PM
May 17 W1's at 10 AM
May 22 W8's in Michigan at 4 PM
May 24 W1's and VE2's at 8:30 PM
May 31 W7's and W6's at 6 PM

We managed to get in on our share of the stuff coming in. Worked Vermont and Wyoming for two new states making a total of 33.

Have converted our APS 13 for 420 Mc, and gave it a try. So far, 100 ft has been the limit of contact between the APS 13 and the BC 654-A. Hope to have more on this for next issue of TS.

There were sporadic E openings almost daily in various parts of the country and states worked totals are rising accordingly. Scores of ops are reaching the 40 mark and the leader, W6UXN, of Inglewood, California, has only one state to go for 50 mc WAS. I have worked 33 now. On May 31st the 50 mc band was open through-out the entire day, with the early evening hours supplying the first opportunity for trans-continental work. W2BYM, of Lakehurst, New Jersey worked three W6's and XELKE, who was heard as far north as Boston. The next two months should be the most interesting part of the year for 50 mc workers. Every-one with equipment capable of operating 50 mc should do so during the next two months and report results to me direct.

The FCC has deleted TV channel #1 (44-50 mc) and assigned it to non-government fixed and mobile services. Ten meter phones will still have their 2nd harmonics in #2.

"FOR SALE OR TRADE"

By Humpy Campbell, SWL

Bud 500 watt 10 meter tank coil, for sale or trade. See C Long, W9AZU, local EC.

BC 1068-A HF receiver 100-157 mc National RBL#2 LF rcvr 15-600 Kc For sale or trade, See H Campbell

National NC 44, E Cartwright, W9QLW. For Sale.

For listing of your items contact me before the 10th of each month. I know each and every one of you have something that you wish to sell or trade. Listings are free to Society members in good standing. Mail notices will be OK.

ARRL bulletin to all amateurs.

A National ARRL Convention, the first in ten years, will be held Labor Day week end, September 4, 5 and 6 under the auspices of the Milwaukee Radio Amateurs Club. Scene of the gathering will be the Milwaukee Auditorium. A very complete program will include meetings conducted by ARRL officials covering organization, DX, traffic, VHF, emergency and every phase of Amateur Activity, numerous technical talks, hidden transmitter hunts, a competition for mobile units, Army and Navy demonstrations, equipment displays, sightseeing tours, style show and special features for the ladies, entertainment and dancing. Saturday night will be Black Forest Evening at which will be staged one of the parties for which Milwaukee is famous. Several FCC officials will be present. Advance indications are that it will be the biggest and the most interesting convention in amateur history. Reservations and further information may be obtained by writing the general convention chairman, Jack Doyle, W9GPI, 4331 North Wildwood Avenue Milwaukee 11, Wisconsin.

"APPROXIMATE INDUCTANCE CALCULATIONS"

By John F Clemens, W9ERN

The formula,

$$N = \sqrt{\frac{3A + 9B}{.2A^2}} \times L$$

for inductance presented in the ARRL handbook is well known and enables one to calculate the number of turns required to produce a given inductance when the length and diameter of the coil are known. While this formula is quite accurate, it is certainly not simple enough for mental calculations.

In many ham applications an accuracy of \pm ten per cent (10%) is quite sufficient. A simple relationship may be obtained from the original formula by setting the length (B) equal to the diameter (A) in the formula above. When this condition has been assigned, the formula becomes:

$$N = 7.75 \sqrt{\frac{L}{A}}$$

If the ration of B/A is made approximately equal to 1.1, the formula becomes:

$$N = 8 \sqrt{\frac{L}{A}}$$

Since ham tank coils are often wound so that the 1.1 ration holds, resonable accuracy may be obtained from this simple formula.

It is also worth remembering that at 7 mc the LC product is 1517, or roughly 500. If this constant is memorized, the LC for other bands may be obtained by multiplying or dividing by four to go to the next band. The LC product for 80 meters is, therefore, (approximately) 2000, for 20 meters, 125, and for 10 meters, 32.

An example will illustrate the simplification attained. Let it be required to resonate 50 mmfd at 7mc. The required L is 500/50 or 10 uh. If a 2" diameter form is used, the L/A ration is 5 and the square root of 5 is (roughly) 2.2. Multiplying this figure by 8 gives about 18 turns.

Therefore, 18 turns on a 2" form about 2- $\frac{1}{2}$ " long will resonate with 50 mmfd at 40 meters.

L - Inductance, Microhenries (uh)
A - Coil diameter, inches
B - Coil length, inches.

If you have traffic and want to get it off, and rest assured it will be delivered, use the following CW nets.

Ohio Net	3730	7:30	PMEST#
Hit & Bounce	3637	5:00	AMCST*
Indiana QIN	3656	6:30	PMCST#
ILN (Illinois)	3765	6:15	PMCST#
KYN (Kentucky)	3810	7:00	PMCST#
Tennessee Net	3737	7:30	PMEST#
QIW (Mid-West)	3665	7:30	PMCST#

Monday thru Friday

* Daily

@ Monday, Wednesday and Friday.

"FATHER OF RADIO"

Not Guglielmo Marconi, but Alexander Popov invented radio apparatus, whose most known creation is the wireless, the Russians claim. They have decided that 7 May each year shall be known as "Radio Day" because on that day in 1895 Comrade POPOV received and sent a radio signal 600 yards. They say this to beat Mr Marconi by one year.

"YOUR EMERGENCY COORDINATOR"

By Charles Long, W9AZU

Emergency activities as pertains to 10 meters at least are nil. W9FJI has expressed his desire to join the local AEC. Any others desiring to get into this work, and give ham radio a boost see me, as soon as possible. This applies to all Tri-State amateurs either CW or phone.

A practice net is scheduled for 9 PMCDST each Tuesday evening on ten meters. Lets give this thing a boost, because it can happen here. CU Tuesday.

"THE SKY HOOK"

By Fay Gehres, W9AIN.

The sky hook, or, as it is more commonly known, the antenna, comes in for considerable debate and study. In radio broadcasting the antenna has been developed to a high degree of efficiency and perfection and in the high frequency field the development has been especially rapid in the last few years. The basic theory in most cases is very similar and applicable to design and construction of amateur antennas.

The question of which type of antenna is best for amateur use is largely dependent upon two major factors; the first is, what we expect from an antenna, the second what type antenna we ourselves are able to make function more efficiently. The final evaluation in every case is to be able to match impedances--that is, the resistance and reactance adjusted properly from our final tank circuit into our transmission line, then to our antenna and finally from the antenna into space. Only when these impedances are correct are we able to realize maximum radiation or efficiency.

On our lower frequencies we usually have little choice or variation as to our radiating systems, as the size of our lot decides the issue most of the time. Should space permit we would all have elaborate V antennas or several rombics around us in order to pump our signal where we want it most. Those who have only a small lot usually operate from a high clothes line, possibly some sixty-five feet long: when we must operate below about seven megacycles we can work the antenna proper plus the feed line as an antenna with the ground and have a marconi system that works reasonably well on three and one half megacycles.

There is a little theory we should all know in order to intelligently choose and construct our antennas for our individual locations. The question of polarization is not important on the lower frequencies but when we operate from fifty megacycles on up whether we operate with horizontal or vertical antennas is quite important. The question of antenna length is not too difficult to remember. In space a half wave length in feet is 492 divided by the frequency in megacycles while a half wave length wire antenna is slightly shorter by approximately 5%. The latter can also be calculated by the formula--a half wave length antenna in feet is 468 divided by the frequency in megacycles. These electrical length should be familiar to every amateur especially those who don't own their back yard and are required to greet a new landlord from time to time.

A little knowledge of current and voltage distribution in an antenna is helpful when we want to connect to our transmission line. One thing to remember is that the current stops at the end of the antenna as there is not more wire for it to travel on. Therefore we must have zero current and maximum voltage due to the standing wave on our antenna. Since the half wave antenna system is the smallest tunable antenna we find the highest voltage is at the two ends while the minimum voltage is at the center since it is farthest from the ends. Where the voltage is minimum we always find the current maximum. From the impedance standpoint, voltage means high impedance and current low impedance: therefore, our halfwave antenna varies from a low or possibly zero impedance at the center increasing rapidly to a very high value at each end.

Any antenna will be capacitive if it is too short and in order to tune it to the frequency

The sky hook Cont'd.

we desire we must insert a series inductance somewhere along its length which is called inductive loading. From the standpoint of radiating efficiency it is much better to inductive load an antenna out toward the end rather than at the center because it has been found the center of an antenna system carrying heavy current is the better radiating portion of the antenna: besides the DC resistance losses will be less severe where the currents are less.

An antenna will be neither capacitive or inductive when cut to its exact length for the frequency desired. Such an antenna will be purely resistive and will operate at a very high efficiency. When an antenna of proper length is less than one quarter wave above ground we find its resistance to be low or less than 75 ohms. In fact it varies from zero resistance on the ground up to 75 ohms at one quarter wave above ground. Between one quarter and one half wave above ground we find the resistance to vary from 75 ohms up to nearly 100 ohms at .35 wave then back to 75 at .5 wave. Between .5 and .75 wave it varies from 75 ohms down to 58 ohms and back to 75 ohms at .75 wave length above ground. This is a very interesting characteristic and is used by experimenters to correctly match an antenna to any feed line whose impedance is somewhere below 100 ohms by simply adjusting the antenna height above ground.

An antenna will be inductive if it is too long. With a series capacitor, usually placed near its center, we are able to tune our antenna to the desired frequency.

To find whether a half wave antenna is tuned to its proper length, place a current indicator such as a thermocouple meter or small lamp in series at its center and vary its length or vary its loading inductance or its loading capacitor. The meter will read maximum or the lamp will be the brightest when the tuning is correct.

Antennas need not always be half wave antennas. A full wave or a one and one half wave antenna will operate very satisfactorily. It is customary to work an antenna some multiple of the half wave length. The longer the antenna the more directive it becomes, radiating a larger portion at right angles from the direction of the wire itself.

There are times when we desire our transmissions to go in one direction only. To achieve this we may place several half wave antennas in a plane and feed each of them from the same feed line. The more common amateur practice is the placing of two to four half wave antennas on a plane and driving only one of the inner antennas. We can control directivity by tuning the antennas to a slightly lower frequency for reflectors and a higher frequency for directors. These are called beam antennas and are rotated in order to change their directivity. Very good gains in directivity are thus obtained. Similar to placing an antenna near the ground, the placing of antennas near each other greatly reduces the antenna resistance and matching to the transmission line becomes more difficult. A good four element beam will have a resistance of 15 to 20 ohms. With a T matching section we can bring it back up to approximately 72 ohms which aids in transmission line matching.

The V antenna increases directivity and a V beam of four elements is an improvement over the straight beam. A further development of the V is the Rombic antenna consisting of two V's back to back and fed at one corner while being matched at the far corner with a 700 or 800 ohm resistor. The rombic has high directive properties. The folded dipole is a good antenna and from the insulation standpoint has its advantages. Like the T matching network higher matching impedances are also available with the

The sky hook, Cont'd.

folded dipole. Top loading antennas with a large top structure is popular where maximum height is limited. There are many other antennas such as the broadside and end fire arrays, the concentric antenna, and last the "Slot" antenna which shows promise for specific applications.

Antennas are interesting to study since there are so many variations one may choose from among the common types. With only a few fundamentals well known, any amateur should be able to construct good efficient antennas. Wise use of these fundamentals result in more power in the air, rather than having the power dissipated in the feed line before leaving the "Sky Hook".

Look for future articles on Antennas and antenna design by Mr Fay Gehres, W9AIN of Electronics.

" N E X T M E E T I N G "

TIME

8:00 P Central Daylight Saving Time

Date

25 June 1948

Place

City Court Room, Evansville
Police Station, second floor

Program

Mr Paul Robbiano, W9NEC, ex W6PKM, of Electronics Research, Inc, a Technical Editor of TS, will talk on "OSCILLATORS".

Mr Robbiano is a graduate of Stanford University. During the war, he was with the Radio Research Lab of Harvard, and spent some time in England for the Lab.

Come early for the Gab fest that always takes place before the meetings. Are you tradin' gear?

eight

"LETTERS TO THE EDITOR"

3335 College Ave
Indianapolis, Ind

Editor, TS:

Many thanks for the Tri-State Sparkes (TS). It is the Best Club Paper in the State;.....
.....Mac, do you have any ideas on stirring up some competition between the various clubs in the state? There are 17 clubs of assorted size and make up in Indiana, yet outside of the Evansville and Fort Wayne Clubs, little activity seems to take place.

CU FD Mac. 73,

Charles Conway, W9FSG
Section Communication Mgr., ARRL
State of Indiana.

(Thanks Charley for remarks on TS. As to activity, we need more down here also. Maybe our president will appoint an Activities manager, and we will enter in some Intra-State contests. What say Fay?)

740 East Powell Ave
Evansville, Indiana

Editor TS:

I would like to congratulate you on the very fine edition of TS. I regret that due to my working hours I am unable to attend any meetings.....
.... Would appreciate receiving TS every month. 73,

Gil, W9THD

Humpy Campbell has just completed a 30 watt 40 meter CW rig. Also has a very sensitive wave meter built around a Silver 903, it also can be used as a field strength meter and a phone monitor.

- - SWITCH TO SAFETY - - -

"GRID DIP OSCILLATOR FOR VHF"

By Ralph Barnett, W9UIA, WQKB.

We are now the proud possessor of a grid dip oscillator, something that I have wanted for a long time, but till now didn't have the time or ambition to build. This one was built in about an hour in a box 2x4x6. Then spent the next week winding coils and getting them calibrated.

Since I was only interested in VHF, I used a small tuning condenser and very short leads that allows it to tune from 12 to 200 mc. This is continuous coverage with two other coils to tune the 80 and 40 meter bands. Found it only necessary to calibrate each coil at three places on the condenser. In, half open, and all the way open. Many refinements are possible and a stable voltage controlled circuit could be added. Also much finer calibration may be desired.

All that is necessary for operation is to place the proper coil in the oscillator and loosely couple it to the circuit under check, turning the dial until the grid current dips.

If you have spent hours trying to get a circuit on frequency by winding too many turns on a coil, then cutting them off two at a time, only to find that you should of only cut off one at a time as I have, you will find this gadget is well worth the trouble, to construct.

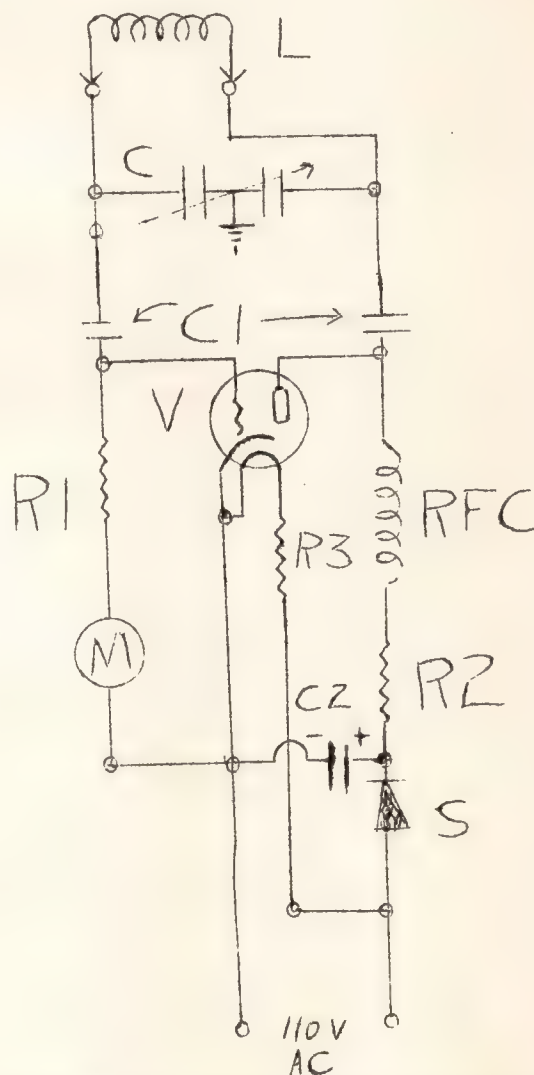
Coils.

2" hairpin #14 wire	112 to 170 mc
3 turns #16 1" dia	44 to 57 mc
6 turns #16 1" dia	26 to 34 mc
17 turns #16 1" dia	12 to 16 mc
31 turns #20 1" dia	6 to 8 mc

You should have no trouble with this grid dip oscillator, as it is very straight forward.

"SWITCH TO SAFETY" nine

- L - See coil table
- C - 25 mmfd split stator
- C1 - 50 mmfd
- C2 - 40 mfd 150 volts
- M - 0-1 DC Ma
- R1 - 18,000 ohms 1 watt
- R2 - 47,000 ohms 1 watt
- R3 - 500 ohms 20 watt
- S - Selenium Rectifier
- V - 6C4 Vacuum tube
- RFC - Ohmite Z-1



W9GFO had a two hour contact with VK2ID after a dead-band CQ on ten the other night. Also is moving. W9BAX still pounding brass on 40 meters. W9QLW has completed new operating table, location, ect. Also still has that 400 foot per leg V beam for the hard to get DX. W9EHU home now. W9EHU, W9QLW and W9DGA the unholy three are again together on 40 & 20 now.

"HOWS YOUR DX?"

By Carty Cartwright, W9QLW

Twenty meters has been only fair this last month. Both east and west coast have been comin' thur around DX time, making the DX rather hard to work. The usual Europeans haven't been coming thru well at all. On June 6th several HBL's were heard using this prefix for a special test, instead of the usual HB9 prefix.

OA4CS is heard fairly regularly near 14,015 kc in the PM. ZD2RGY 14,100 kc, ZD1BD 14,110 kc, VQ3HGE 14,120 kc, OQ5RA 14,100 kc, VP4TAU 14,005 kc, UA4FC 14,015 kc.

Forty meters has its VK's, ZL's, G's, and F's early in the morning hours with a few south americans in early evening, but static has become a problem on this band. According to QST, any DA german prefix are no good, and I just worked DAØCM too. W9DGA came up with two new QSL's for a total of 50 countries confirmed out of 59 worked. Charlie W9AZU made his entry into the DX list with 31 countries all on ten phone during a years operation. W9UIA has now 48 countries confirmed out of 59. I hear W9HQF occasionally on ground wave from Newburg stalking the DX. W9QLW has 60 confirmed out of 77.

DX	"WHO'S WHO IN D X"	
	Confirmed	
W9GFO	81	-
W9QLW	77	60
W9DGA	59	50
W9UIA	59	48
W9EHU	55	-
W9WNM	48	-
W9PNE	44	-
W9HQF	31	-
W9AZU	31	-

A few of the better ones hooked this last month; MB9BA, OZ7EU, GM8HP, GW3AKB, OK1ZB and HBLU. May I thank all the gang for their remembrance during my sojourn with the hospital. Don't forget to mail your DX to me before the tenth of month. Good luck to all you DX hounds.

National Receivers in stock,
also Millon, Cardwell, B & W
coils, Use the R9'er for TV.
Bargans in SURPLUS every month.

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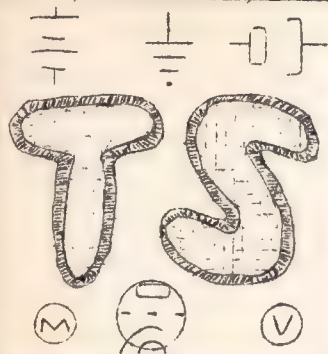
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Evansville, Indiana

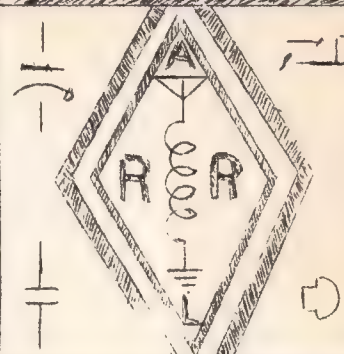
Come in and see us.

"PATRONIZE OUR ADVERTISERS"

TRI - STATE AMATEUR RADIO SOCIETY



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EDITORIAL

With this the third issue of TS, things seem to be taking shape. It is planned to have a series of articles on math, traffic handling, and simple useful gadgets which can be put to good use in any ham shack. If you have any good ideas, put them on paper and send to me, for publication in TS. If you would like to see some particular type of article in TS, don't hesitate to write and I will make arrangements for someone qualified to write the article for publication. If you like TS, I would like to know about it, If you don't like TS, I still would like to know about it. Can you think of any way to improve TS?

Remember last years TARS QSL-test? Start getting your rig all set for the contest again this year. Basic rules are published elsewhere in this issue of TS.

The President, Mr Gehres, has promised to get things rolling for this years Society Picnic. So if you are asked to help along these lines, get in there and pitch. The picnic last year was without a doubt, the most successful one thing the Society had done. Let's repeat.

I had planned at this point to tear 75 meter phone operation apart, but after reading the copy, decided against it, otherwise I am afraid I wouldn't have had many phone friends left. Viva ARRL!!

CCM

"AS I SEE IT"

By Fay Gehres, W9AIN Pres TARS

Now is the time to do it! This fact was made very clear to me when I dropped in to see many of the Society members last Sunday. The weather being hot, I expected to see them at rest before a large electric fan, but, to my surprise, more than eighty per cent were either engaged in operating their amateur rigs, rebuilding or working on their transmitters, putting up a new antenna or, as I found one of them, working on his plumbing with a pipe wrench!! Who said plumbing isn't necessary for the amateur in these high frequency days?

All of the above is a healthy sign for our hobby. With the new calls appearing in our membership, more activity is in store for us than ever before. We need at least a small share of this activity from each of you in order to make our Society program click. How about starting --N O W ! ! ! !

"YOUR SECRETARY"

By Vic Chamberlain, W9BBC

Fellows I would appreciate any applications for new or renewal QST applications. As was mentioned in last months TS, we as Society members can still obtain QST for \$3.50 providing our initial order is for ten or more, and should be ordered thru the Society.

I wish on behalf of the Tri-state Amateur Radio Society to welcome two new hams to our fair city, and one to Henderson Ky, our suburb. W9EGF, Earnie Mangus, W9DPE, Bill Elmendorf, and W4NUQ, Bethel Brown. Would like to see you fellows join our Society.

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"HOWS YOUR DX?"

By Carty Cartwright, W9QLW, WEOA

A good indication of DX conditions on 20 and 40 is shown in the standings of WHO'S WHO in DX". W9WNM rang up seven new countries tho, to tie for 5th place with 55. W9QLW added tow QSL's and W9DGA one confirmation for 62 and 51 QSL'ed. There surely must be more fellows working DX, so why not get in the column? Let me know how many countries worked, and have confirmed, what you are working and hearing. Would like to have more from 10 and 80. How about you phone men? W9BBC, W9MDX, and how about you Frank? W9RZM, the old Zoological station, of old ten meter fame. A year long DX contest sponsored by "CQ" magazine is quite interesting. The July issue has all details of the contest. The contest is world wide, so here's your chance to get some of the Good ones, who are looking for W's for a chance to increase their score. Incidentally there is a very nice country and zone list available free if you drop CQ magazine a line. W9GFS is working a portable rig from his car on 20 CW. Not mobile, as yet the lower frequencies are not included in the mobile status. Seems as Phil is working out very fine with just a few watts.

Forty meters around early AM hours still comes up with its share of DX. Heard W4DGW/KJ6 on Johnson Island. This is the second KJ6 I have heard since post war activities.

Twenty meters has really been rugged, DX creeping in at almost any time between short skip conditions. Here are a few of the better ones heard on 20. W4FVI/KX6, 14,040 kc, CT3AA 14,200 kc, and ZA2AA 14,060.

Wonder how many of you read the article "Gon-Waki" on pg 80 of the July issue of QST? It was of particular interest to this reporter, also the columns at the end of the article too; Rare DX Stations, and W DX Chasers. I've maintained that the deplorable conditions which exist when several DX hogs are

three

loose, could soon be stopped if the DX stations themselves would use the right technique. In an attempt to impress on we DX'ers better operating practices, put your cans on. Don't work the rare ones a second and 3rd time. Nothing is more disgusting than to hear W6** plop on top of E4P and back slap for 10 minutes to see if his QSL was received just to impress the little boys of his Kw. Two or three other W's could have got another country in the time wasted. Besides a follow up QSL would do much better. Make QSO's short. If the DX wants to chew he will so signify. Don't hang around, your CTH and handle are not necessary, he can read the call book, or QSL via ARRL. Know your DX. A few minutes listening pays off. Find out if he tunes off his frequency. Determine if a fast break and call won't get him. Don't be afraid to use a Break. Listen to other W's who call him. Pick that clear fraction of a channel for your call. Don't call too long, and don't pack on top of him, especially if you can hear other W's calling him. If you're one of those who call "CQ-DX", sign your call often, personally, I think on never need send "CQ" over three times without signing your call. Don't QSY with your rig on the air, use a dummy antenna if testing for any length of time. The band might be dead at your location, but you can QRM DX for other localities. If QSO'ing locally, reduce power to that which is necessary only.

Send your contributions, please, on any phase of DX and make this your DX column. CL.

"WHO'S WHO IN DX?"

	worked	confirmed
1. W9GFO	81	62
2. W9QLW	77	62
3. W9DGA	59	51
4. W9UIA	59	48
5. W9EHU	55	--*
6. W9WNM	55	--*
7. W9PNE	44	±±*
8. W9HGF	31	--*
9. W9AZU	31	--*

**Stations please notify W9QLW of confirmed countries-Ed. Good luck to all of you DX Hogs.

"A SIMPLE METHOD TO SWITCH DOUBLERS"

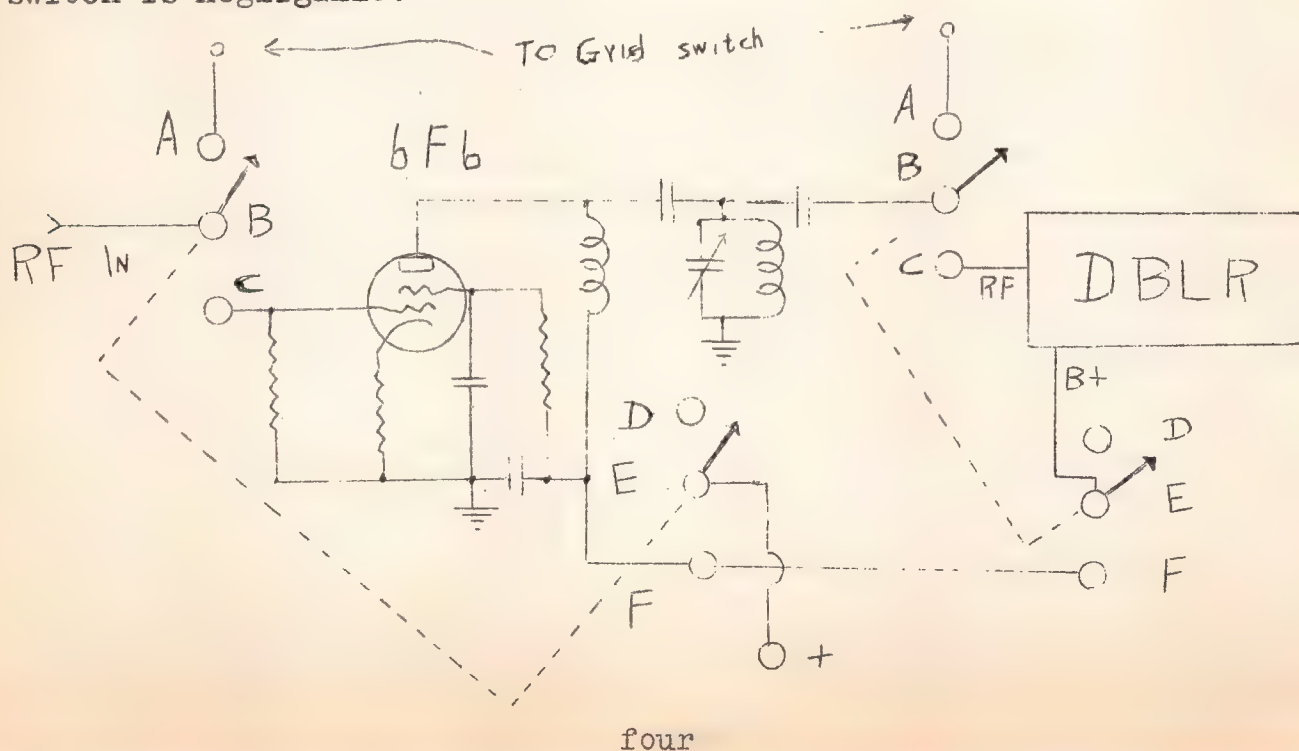
By Clifford C McGuyer, W9DGA, WEOA, WMLL, WAUT.

For the past year and a half, I have been using a system of band switching doublers, in and out of my exciter. I have four such doublers in my exciter, with one of them being either used as a doubler to 14 mc or a tripler to 21 mc, if and when we get this band. So with this switching arrangement, I get output on 80, 40, 20, 15, and 10 meters, with more than enough drive for an 807 buffer amplifier, driving a pair of 810's in push-pull.

This switching system is based upon the double pole, double throw toggle switch. Switching connections are as follows. Excitation is feed into point B, supply voltage into point E. Plate and screen voltages are taken off point F. Point A goes to a contact on a grid switch, which is a four position, single throw rotary switch, in the buffer amplifier grid circuit.

With the DPDT toggle switch in the upper position, there is no plate voltage or excitation to the doubler stage. With the switch in the lower position, excitation is feed in Point B, comes out at C, then goes to the control grid of the doubler. Screen and plate voltages are feed from E to F, thence to the screen dropping resistor, and to the doubler plate. Output then is feed thru the coupling condenser to point B on the switch in the following doubler circuit. Two stages are shown in the accompanying diagram. As many doubler stages may be used as needed in a particular application.

All condensers, except the one coupling condenser, are .001 600 volt MICA condensers. The coupling condenser is 25 uufd, and is also MICA. The grid resistor is 100,000 ohms, the cathode resistor is 200 ohms, and the screen dropping resistor is 20,000 ohms. The plate choke is a 2.5 milli-henry radio frequency choke. You should have no trouble duplicating this switchable doubler. Even at ten meters the losses in the ordinary toggle switch is negligible.



LAZY MAN'S MOBILE RIG!!

By Phil Hatfield, W9GFS

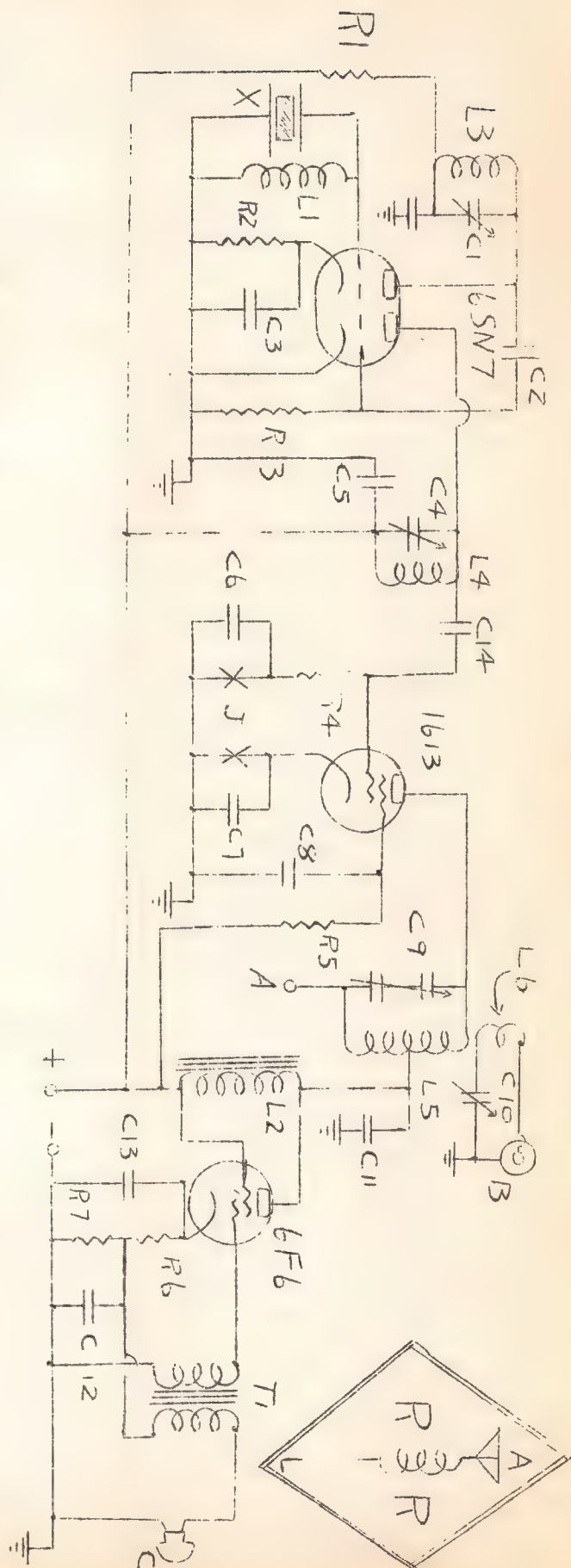
Having heard some of the local boys driving around town and operating mobile, I have for some time wanted to do the same thing, but sheer inertia has prevented me from doing it.

A PE-103 dynamotor was available, but an evening spent tracing the relay circuits convinced me that installation would be troublesome for a lazy man. However, a portable vibrator supply with simple control circuits was also kicking around in the shack and seemed to offer the easiest solution to the power supply problem. Its 300 volt-100 mil output limited the power available for the transmitter.

The first step was to install a receiver in the car. The vibrator supply was tossed in the trunk, a couple of holes punched in the cardboard partition in the back of the seat, an old National SW3 TRF receiver balanced on two rubber kneeling pads, and the receiving installation was complete.

A 20-meter crystal and a few odds and ends resulted in the transmitter. A 6SN7 was used as a crystal oscillator and doubler driving a 1613 (surplus 6F6) which was modulated by a 6F6 driven by a single-button carbon microphone. The output was fed into a quarter-wave whip antenna, worked against the car body as a ground. Type APC condensers were used for the oscillator and doubler tank circuits and a Cardwell ER-15-AD for the final tank circuit. Neutralization was accomplished by bringing a wire from the bottom of the final tank circuit to the number 6 pin on the 1613 socket. As you know pin number 6 is blank. See point A on the Circuit diagram. Coil values may vary with a different parts layout, but they will give you something for a start.

Most by-pass condensers are .005 BC Hi-Kaps. Jacks are provided for metering of final screen and cathode currents. They are indicated by "J" on the circuit diagram.



Microphone current was obtained by tapping the cathode resistor of the modulator tube. No gain control was necessary. The rig will deliver a couple of watts to the antenna, which is adequate for local rag chews.

Now if somebody will only loan me a noise clipper and a good converter, I'll be all set.

Parts List

R1-2,700 ohms
 R2-330 ohms
 R3-47,000 ohms
 R4-10,000 ohms
 R5-8,200 ohms
 R6 and R7-100 ohms
 C1-50 uufd APC variable
 C2-30 uufd mica
 C3-.005 BC- Hi-Kaps
 C4-25 uufd APC variable
 C5-.005 BC Hi-Kaps
 C6, C7, C8-.005 BC Hi-Kaps
 C9- 15 uufd Cardwell ER-15-AD
 C10-100uufd APC variable
 C11-.01 paper
 C12-.25 paper
 C13-100 Mfd-50 volt
 C14-30 uufd mica
 L1-2½ mhy RFC
 L2-30 Hy choke
 T1-Single button carbon microphone transformer
 J- Closed circuit jack
 A-connect to pin six on 1613
 X-20-meter crystal
 B-Co-Ax connector
 I3-12 turns #24 ½" dia
 I4-6 turns #20 ½" dia
 I5-14 turns #14 1" dia
 I6- 4 turns #14 1" dia

A bug cannot be set for 40 words a minute when the rhythmic experience of a man behind it is geared to 18 or 20 words a minute. It is better to use a straight key than to try a bug when not experienced in it. Manual operation is a prime requisite before attempting to handle a bug.

FBG and FBG2 are call signs assigned a French polar expedition now in Greenland. Frequencies in use are 8,270, 14,487, and 29,200 kilocycles. Amateurs answering

By Ralph Barnett, W9UIA, WQKB

True to all our expectations, the month of June was terrific, and was much better than May for sporadic E openings on six meters. We heard nearly every state at one time or another during last month. You should of been there for all of the fun. Some of the better openings during June were:

1st-8 pm Wyoming, 3-6 pm W4,
 4-7 pm Tenn, 9-10 pm Fla.
 3rd-6 pm W4
 4th- 7 pm Tenn
 9th- 10 am Fla, 8-9 pm Tex, Calif,
 Ia, Colo, and New Mexico.
 11th-6-9 pm W1, W2, VE2, VE3, W5,
 and Mexico, XE2.
 14th- 7 pm Texas.
 16th- 4 pm Fla, 7 pm Minn, SD, ND.
 21st- 10 pm Okla and Texas.
 22nd- 2 pm Texas, XE2, 9 pm Texas.
 23rd- 7-9 pm Texas, Colo and XE2.
 27th- 4-8 pm Texas. Kan, Colo,
 Wyoming and Nebraska.
 28th- 10 am to 3 pm, NJ, NH, Vt,
 Conn, NY, SD, Wisc, Mich
 and Minn.

Two meters is picking up. W4FBJ in Shepardsville, KY, has been contacting W9JMS in Cory, Indiana (125 miles) every morning at 7 am on two and six meters with the two meter signals stronger than the six meter signals.

I have now a total of 35 states worked on six meters, and so far this year have worked 25 states. Didn't have time to do much on 420 mc this last month, but promise to get some information for next issue, that is if the weather isn't too hot.

The September VHF Party will be held 25th and 26th of September. So start getting your hf gear set for this Party which looks to be a big success.

calls from the expedition should use frequencies at the low end of our Seven and Fourteen Mega-cycle bands. Should be good DX!

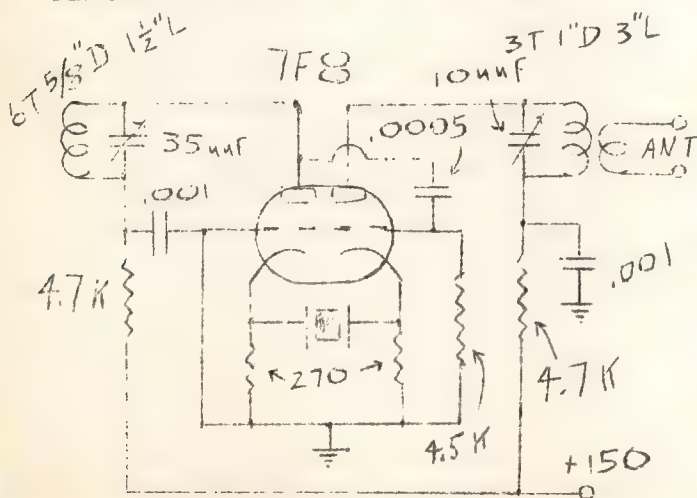
"TWO METERS-IN ONE TUBE"

By Ben Zieg, W9EHU

The series mode oscillator was recently introduced to me when I was assigned the project of building a 150 mc signal generator for some FM receivers operating on that frequency. The diagram was immediately recognized as containing tremendous possibilities for either home or mobile two meter transmitters and receivers. Using the circuit as shown here, it could be used as an exciter for a larger transmitter, while a converter using the crystals for the hf oscillator and tuning the IF frequency of your receiver would make a very effective receiver on the band.

In this article I shall discuss only the possibilities of the circuit, and shall leave the opening to those who would like to delve into the theory of the circuits to read the article by Mr Goldberg and Mr Crosby on page 24 of the May 1948 issue of Tele-Tech.

In the oscillator that I built a 7F8 tube was used, it being a loctal twin triode with separate cathodes. The oscillator was to be tuned to 50 mc and the second half of the tube to be used as a tripler, thereby giving output on the frequency of 150 mc in one tube. Circuit used is as follows.



The leads were not too critical, except that the cathode leads, if brought to a crystal switch, as I did, because of the

desire to have three crystals mounted on a switch, should for best results be kept parallel and about $\frac{3}{4}$ " apart. Then length does not seem to matter. I have tried one foot leads, but there seems to be no ill effect at all. The 7F8 in this circuit has not been tried as a driver of another stage, but with a quarter wave antenna, there is enough rf to light a neon bulb a slight bit. It isn't a lot of power, but probably enough to drive a 6AK5 or some similar tube.

It is a problem of getting a superhet receiver on the two meter band that has any degree of stability. Using the idea shown in the ARRL handbook for several years, and finally put to use in the Collins 75-A receiver, it seems again to make for practicality of the two meter rig. This circuit uses a crystal controlled hf oscillator, and tuning is accomplished by tuning the IF amplifier, which will probably be the RF stage of the receiver. This converter may be tuned to the 2 meter band, and then all tuning is accomplished by tuning the receiver in the desired conversion frequency, probably chosen around 20 mc. Excellent results have been accomplished in such circuits, in some cases the mixer and RF stages of the converter being tuned also to keep the signals at the best level in relation to noise. (See diagram next page).

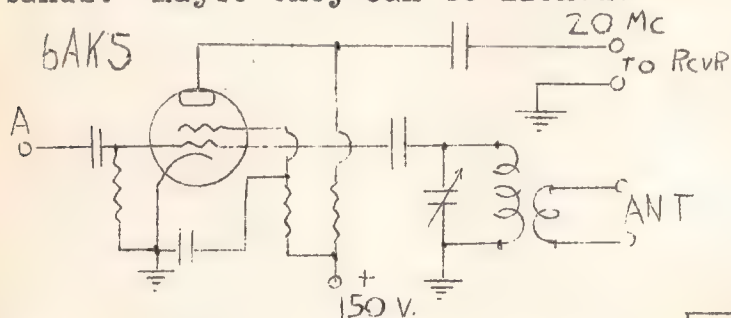
Crosby and Goldberg tell of getting one of these crystals to oscillate as high as 118 mc, and used a twin triode 7F8 tripling in the last stage to get as high as 250 mc in one tube. They were able to go to some three-hundred mc by using a pentode in the amplifier stage, utilizing it for its increased harmonic output.

The crystals used are called "quintupler" crystals, and are the only thing that might be considered forbidding. They are priced at \$8.00 each, and not decreasing in price until 100 or more are ordered, and then they cost \$5.00 each.

Two Meters (Conc)

However for the sake of less stages to resonate and crystal control with one tube instead of the usual five or six to get to two meters even the price at \$8.00, the price isn't near as forbidding as it might seem at first mention of the price.

DX possibilities according to a recent article in CQ is more promising on two meters than on five. Simplicity of circuits has been one of the things holding back progress on the two meter band. This series mode oscillator could add to the ease of construction of equipment for the high frequency bands. Maybe they can be licked.



Note: Point A to be capacitive coupled to output of high frequency oscillator. Oscillator plate section tuned to 41 mc, tripler plate section tuned to 124 mc, with a conversion frequency of 20 mc.

Rules for TARS annual QSL-Test.

Station operator must be member in good standing with TARS. All operation must be by one operator. Use any band of frequencies open to amateurs by the FCC. One QSL card from each amateur station will count for credit only. QSL cards not required for credit, but confirmation such as a letter, postcard will count. Each QSL card, except those from TARS members count as one point. Each QSL card from TARS members count two points. A member is considered to be a person in good standing as of the last day of November, the year of the contest. The president will appoint an impartial judge to determine order of standing of participants. Results of contest

will be reported by judge to TS for publication. All QSL cards or confirmations to be given to judge by last day of December, thereby giving one month from last day of contest to get QSL cards to judge. Contest period is from the 1st day of September to the last day of November, to allow all Society members equal opportunity. First five places receives "Certificates of Achievement" award. First place receives plaque for one year, with his call, score and year engraved on plaque. When one station receives plaque for three years (not required to be consecutive), permanent award will be made to said station. Results of last years QSL-test are as follows.

W9DGA (Plaque)
W9VMS
W9GFS
W9RDJ
W9WNM

"STATION ACTIVITIES"

By Vic Chamberlain, W9BBC

W9VMS is going strong on 14 mc with an 8JK beam (what about this years QSL-test Cliff?-Ed). W9GFS was heard last Sunday testing a new mobile transmitter on ten meters. W4PKX now has his Class A ticket. Congrats OM. W9BLE has moved to Henerson Ky. W4JBN has a three element beam for 14 mc. W9SWN will soon have a 3 element beam on ten of the wide spaced variety. W4LIR has a three element beam on ten with a HT-9. W9BBC has under construction a Coaxial Vertical antenna for twenty eight megacycles mainly for short haul work within the Tri-State Area. W9ALM now on ten meters. Welcome back Bill after ten years. W4LLR our Treasure, had a visitor from Lemay Mo as W0CHW walked in. W9BAX gone to the Big Falls for a vacation. W9UMS is a big Croquet player, W9UIA also not bad for a beginner, at croquet.

"LOGARITHMS"

By Bob Funkhouser, WEOA

Logarithms, strictly speaking, are exponents! In this article we shall consider only logs to the base 10 (common logarithms), therefore, a logarithm is the number or power to which 10 must be expanded to reach the given number. All logs not further identified are common or Briggian logarithms. These logs consist of an integer called the characteristic and an endless decimal called the mantissa.

You will observe that all numbers that differ only in the placement of the decimal (e.g. 1622, 162.2, 16.22, 1.622, and .1622), have the same mantissa, and the logs differ only in characteristics. To obtain the characteristic this rule may be followed: numbers greater than one (1) have the characteristic of one (1) less than the number of digits to the left of the decimal (e.g. 1.622 has a characteristic of 0, 16.26 has a characteristic of 1, and etc.); and on numbers less than one (1) the characteristic is one (1) greater than the number of zero's (0's) to the right of the decimal and is a minus number (e.g. .100 has a characteristic of -1, .01 has a characteristic of -2). This is written many ways; as 1, or as 9. mantissa -10. The latter is easier in many computations.

Another method of figuring characteristics, which is especially helpful with large figures, is to reduce the number to a single integer to the left of the decimal, multiplied by the appropriate power of 10 (e.g. 256,000,000 equals 2.56×10^8 and the log equals 8. mantissa; .000000256 equals 2.56×10^{-7} , and the log equals -7. mantissa, or 3. mantissa -10.

The characteristic now obtained, the mantissa may be found from any four or five place tables to the desired accuracy. The tables are self-explanatory and should not command more space here.

In formula form the workings of logs are simply:

Multiplication.

$$\begin{aligned}\log ab &= \log a + \log b \\ \log (256. \times 78.4) &= \log 256. + \log 78.4 \\ &\text{or } 2.40824 \\ &\quad 1.89432 \\ &\hline &4.30256\end{aligned}$$

the anti-log, or number is 20,071. Therefore to multiply, add the logs of the numbers and take the anti-log.

Expansion.

$$\begin{aligned}\log a^n &= n \log a \\ \log 256^{12} &= 12(2.40824) \\ &= 28.89888 \\ \text{anti-log} &= 7.923 \times 10^{28}\end{aligned}$$

Therefore multiply the log of the number being expanded by the exponent and take the anti-log.

Extraction.

$$\begin{aligned}\log \frac{n}{a} &= \frac{\log a}{n} \\ \log \frac{6}{256} &= \frac{2.40824}{6} = 0.401373 \\ \text{anti-log} &= 2.5127\end{aligned}$$

Therefore divide the log of the number by the root being found and take the anti-log.

Division.

$$\begin{aligned}\log \frac{a}{b} &= \log a - \log b \\ \log 256 &= 2.40824 \\ 78.4 &= -1.89432 \\ \hline &0.51392\end{aligned}$$

the anti-log is 3.2653, sometimes written as $\log^{-1} 0.51392 = 3.2653$ Therefore subtract the log of the divisor from the log of the dividend and take the anti-log.

Anti-logs are just the reverse of logs and are found by reversing the procedure. In case the mantissa doesn't appear in the tables to the exact figure, interpolation is necessary. Most good log tables interpolate for you by printing "proportional parts" along the margin or in a special section of the book. To use these,

Logarithms, (Conc.)

follow these simple instruction. Find the difference between the next closest mantissa below and above the desired mantissa and find the corresponding column of proportional parts. When taking the anti-log, go to the right set of figures till you find the amount needed to add to the lower closest mantissa to bring it to the desired mantissa; go to the left in the same column to find the proportional part that this is of the difference, then the total anti-log is made up of the number from the vertical column, the number from the horizontal column and the proportional part. For example, finding the anti-log of 4.60212, the next lower mantissa is .60206, the next higher is .60217, corresponding to 4000 and 4001 respectively, the difference is 11. The proportional parts column reads as follows:

P.P.

	11	
1	1.1	We will need to
2	2.2	add 6 to our man-
3	3.3	tissa. So we are
4	4.4	in between 5 and 6
5	5.5	in the left hand
6	6.6	column making the
7	7.7	anti-log .40005.5
8	8.8	Here the anti-log
9	9.9	consisted of 400
		found in the ver-
		tical column, 0

found in the horizontal column and 5.5 found from the proportional parts. Note: If followed closely in a set of 5 place logarithms, this isn't nearly so confusing.

Look for more detailed articles on the use of logarithms in future article by Mr Funkhouser of WEOA.

The Indiana Radio Club Council (an American Radio Relay League organization) will hold its annual picnic and ham get-together at Mounds State Park on Sunday, August Eight. All Tri-State Hams are invited. W9UMS, our Indiana Director of TARS was heard on 75 meter phone the other day. W9CVN working at WEOA now. W9DGA building enclosed shack in the Basement. W9QLW still trying to work now countries amid all of those DX hogs he talks of! ten

"EMERGENCY"

By Harold McClelland, W9WNM
State Emergency Coordinator

It has just been announced that portable mobile operations will be permitted on all bands effective probably by the time this reaches you.

This change in the regulations has long been awaited by amateurs active in emergency work and is most welcome. This will make it possible to use the lower frequency bands for portable-mobile work in almost the same manner as ten meters is now used. No prior notice to the Chief Engineer will be necessary for the first 48 hours away from the home station. Be sure to keep an accurate log.

An entirely new field is opened up. The development of satisfactory antennas for mobile use on the lower frequencies is a subject which should prove most fascinating, in itself, not to mention the development of really effective low frequency transmitters that you can carry around in your car.

We wish to call to the attention of all AEC members, as well as co-ordinators, the great new opportunity to improve their organization and their effectiveness. The value of good mobile stations on 75-80 and 40, instantly available for disaster areas, can scarcely be exaggerated. Dependability over short and medium distances is the greatest asset in this work and the lower frequencies have a case in this regard and should be used, along with all other facilities in any well rounded emergency plan. Now is the time to crank up your BC654's, your portable 40 CW rig, etc. Get with your local EC. He will arrange tests and schedules for you and give you all possible assistance. Your EC in this locality is Charles Long, W9AZU.

"ANTENNA COUPLING TO MOBILE TRANSMITTERS"

By Darwin Covert, W9KVE and WQKB

Mobile work on the ham bands is becoming quite the vogue and most of the gang either have, or have had aspirations of installing a mobile rig in the family gas buggy. Of course there are many things that rate particular attention in order to have a good, efficient mobile unit, such as good grounds, adequate primary voltage at the transmitter, good noise suppression to insure the best reception, etc. However, the biggest Bug-A-Boo confronting most of the fellows seems to be the problem of getting a good transfer of power from the final tank to the antenna. The object of this article is to deal with the mobile antenna and to discuss a simple and effective coupling system.

The quarter-wave whip, inductively coupled, that is normally used on mobile installations has a very low impedance of between 30 to 50 ohms at the base and quite often it is difficult to get this antenna to load properly. Often times the ham, in desperation, will revert to the old standby Marconi antenna by series tuning the system against ground with a variable condenser. This Marconi antenna is OK except that a good portion of the radiation system is enclosed in the car trunk and consequently quite a bit of the radiated power is lost.

The best practical mobile antenna, shown in the diagram, has been proven to be a quarter wave whip fed with co-axial cable (the 52 ohm variety is FB) with the center conductor feeding the antenna at the base with the outer shield being grounded both at the transmitter end and at the Base of the Antenna. It is very important the co-axial cable be grounded at the antenna base so as to keep the terminating impedance at the correct value.

The most efficient place to mount an antenna on the car is at the center of the top. This gives the antenna a very good ground-plane, puts the entire radiating portion of the antenna clear of surrounding objects, and there are no directive characteristics. This type of mounting is impractical on two and six meters but is quite awkward and unsightly on ten meters, as well as making the antenna a target for all the tree limbs in the country. Therefore, the most practical mounting for a ten meter mobile antenna is on the bumper or down on the side of the car body. In the latter methods the efficiency is still very good but the antenna takes on some directive characteristics. For example, if the antenna is mounted on the rear of the car the signal is re-enforced forward in the direction the car is headed (don't ask me why) with some attenuation to the rear and a little distortion in the broad-side pattern.

Now we get down to the problem of coupling this antenna to the transmitter. In the circuit diagram is shown a very simple and effective coupling system used commercially on the 30-44 mc transmitters and is very applicable to ham transmitters. Basically, it seems to be a take-off of the old Collins coupler, with modifications. With this type of coupling it is possible to load the final to any desired point, as well as being able to properly match the line impedance to the antenna. In this circuit, either series or shunt feed can be used in the final tank circuit, however in this instance series feed is used with a blocking condenser, C4, a .002 mica, being used to keep the DC voltage off the antenna. The combination of L1-C1 is designed to tune the output frequency of the transmitter. In the case of a ten meter rig, C1 can be in the vicinity of 25 uufd. C2 is the antenna loading condenser and should have a maximum capacity of

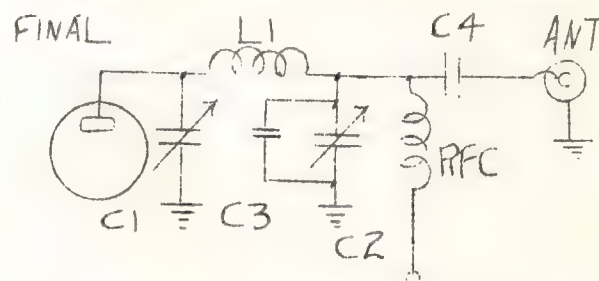
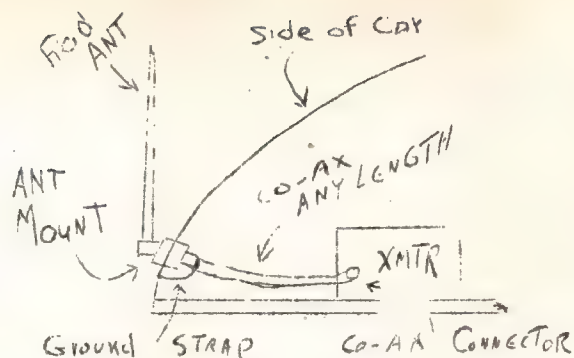
100 to 150 mmfd. Also shunted across this variable is a fixed capacitor, C3 which is a 100 uufd mica. C2 can be of the midget type as the voltage potential at this point is fairly low. The RFC is a conventional 2.5 mh choke.

Now we get to the final tank tuning and loading. Set C2 at maximum capacity. Tune your transmitter as you normally would then tune C1 for minimum plate current. Decrease the capacity of C2 in small steps, each time retuning C1 for minimum current. Repeat this operation until the desired loading is obtained. If, at the minimum point the plate current is more or less than the optimum loading you desire, change the setting of C2 slightly and retune C1 for minimum plate current. It is possible that under certain conditions of mechanical set-up of the antenna rod, that desired loading may not be reached in the range of C2. If this is the case then remove C3 from the circuit. Retune C2 to maximum capacity and again follow the procedure outlined above. The last operation should always be to tune the condenser C1 for minimum plate current, and make this last adjustment with the trunk lid down if the antenna is mounted on the rear of your car. The proximity of metal to the antenna has some bearing on the loading. There are two ways to make this final adjustment. One way is to get inside the car trunk and pull the lid down, then with the aid of a flashlight make the final adjustment. The other method would be to use a long screw driver, provided the tank condenser you are using has a screw driver slot, then closing the trunk lid down on your arm (gently of course) while still holding the screw driver in the C1 tuning slot. Of course in this latter method an external Ma meter plugged into the transmitter will have to be used.

Well fellows, that's it. Now go out and work yourself some nice mobile DX, I hope.

Join TARS and ARRL today.

twelve



Beings that the commercial ops have given an "automatic" operation to our distress call QRR, Effective at once ARRL advises:

QRRR- Official ARRL land "SOS". A distress call for emergency use only by station in an emergency situation. (QRRR calls should never be made by amateur stations outside an emergency zone. The call is authorized only for those in difficulty and needing outside assistance and to be used by stations in a zone of disrupted or non-existent communications.

ARRL Bulletin to all Amateurs

Proof of use of operator license as condition to renewal has been waived through December 31 as a result of FCC action. This postpones for another six months the effective date of the requirement to show three CW contacts on renewal applications.

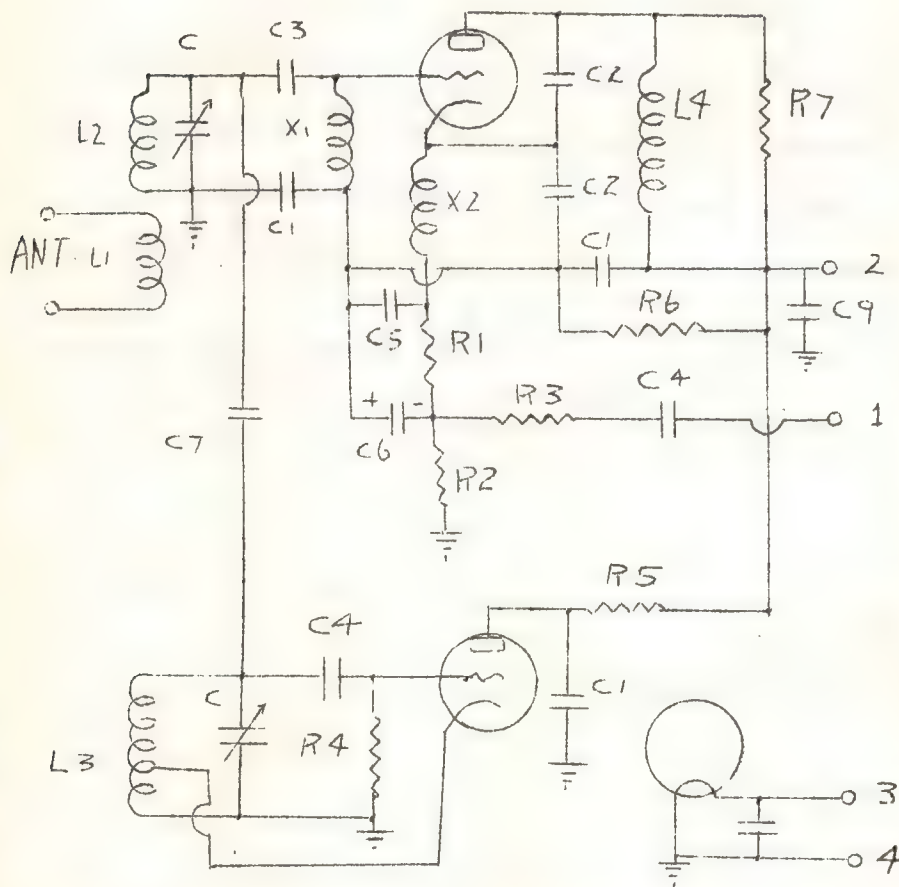
When submitting your articles for publication in TS, please mail them so that I will get them by the 10th of each month. Please by the 10th-

Next meeting will be held at the city court room at 8 PM-See Post Card by secretary for GALA PROGRAM. Date 30 July 1948-come for gab-fest

A FREQUENCY MODULATION TUNER.

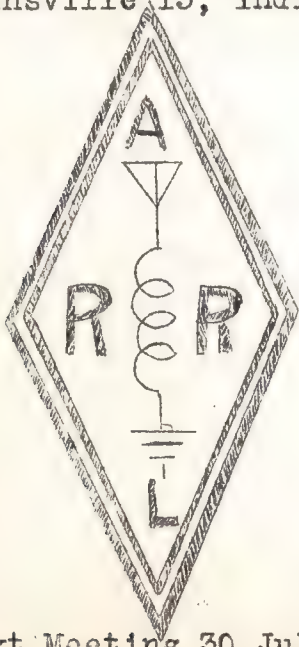
By Ralph Barnett, W9UIA and WQKB.

Are you interested in an inexpensive FM tuner for 88 to 108 mc? Here is one that works and still is simple to build. A 7F8 tube is used, and is a dual triode. One section is a high frequency local oscillator, and the other section is a converter, intermediate frequency amplifier and super-regenerative detector. Nothing more will be said of the circuit, as it is self explanatory. Think this same idea might be carried to higher frequency amateur bands. I am going to try this, and if anything becomes of it, will publish it in TS. If you want FM, get your soldering iron out and get going, because it is just as simple as that.



Special 3C24 (24G) high frequency tube.49¢ Sperti 2 meter Handi- Talkies at \$34.50 8 Mfd 440 volt AC Filter condensers \$1.00 Headphones \$1.89 Espey Television Kits \$69.50 Edwards and Pilot Frequency Modulation Converters in stock. 5 element two meter beams at \$8.40	Headquarters for Hallicrafters and Hammarlund Receivers. BUD Coils Chassis Cabinets Racks, etc. High voltage condensers and miscellaneous Ham gear. WESCO RADIO PARTS 428 Pennsylvaina St Evansville, Indiana Phone 2-2141 Come in and see us today.	HALLICRAFTER RADIOS IN STOCK!!! OHIO VALLEY SOUND SERVICE Wholesale Distributor sll N W Riverside Dr s .Phone 5-9243 Evansville 8, Indiana On Dress Plaza by the river.
CASTRUP'S RADIO SUPPLIES 1014 West Franklin St Evansville 10, Indiana Phone 2-7618 National Receivers***		

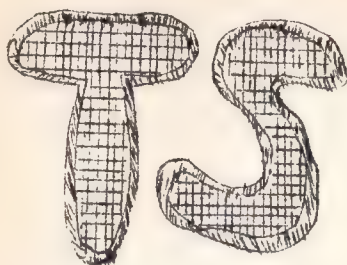
T S. (Tri-State Sparks),
Tri-State Amateur Radio Society,
Clifford C McGuyer, W9DGA, Editor,
1321 South Governor Street, Phone 5-8527,
Evansville 13, Indiana.



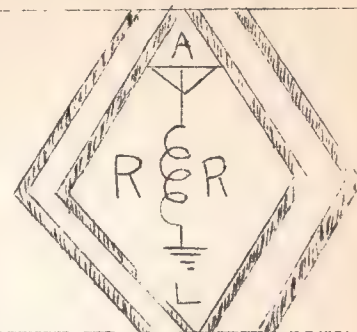
To open, loosen this staple! y

Next Meeting 30 July 1948.

Pay your Dues at next meeting.



PUBLISHED MONTHLY, AS IT'S
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AMATEUR RADIO OPERATOR.



August 1948

Volume 1 Number 4 1948

Clifford C McGuyer, W9DGA, Editor.

EDITORIAL **

Due to the high cost of printing, paper, and such, I have to make a change in the outward appearance of TS beginning this month. It has been costing us on an average of \$16.00 per month, with \$9.00 worth of advertising sold, to be collected by the treasurer, a month. The Society cannot afford this \$7.00 per month due to the failure of former Society members to renew their membership in TARS. I don't like to make this change in the layout of TS, for I thought it presented a neat appearance, and this layout is quite inferior to issues of the past. I think the president Mr Gehres, should have the membership committee produce some results, or if we don't have one, one should be appointed, and the Society produce some money into the treasury. We came out about \$100 dollars ahead the first year, but I'll bet we don't have \$200 at the end of the present year, unless some action be take now. Remember we want a club-house of our own, and unless we advance towards that goal every year, we'll never get it, and the Society is doomed to early failure. So if you are behind or haven't paid your dues, or one of those fellows who have been attending meetings and still haven't put that first dollar on the line,-- how about it? * Don't forget TARS big annual QSL card contest to begin 1st of September. For complete and official rules see July, page 8 issue of TS. * Don't forget that the deadline for articles in TS is the tenth of the month. Sorry that some of the contributors who normally have articles in TS, didn't come thru, i.e. we don't have any local station, or emergency activities. How about it fellows, get those copy in by the 10th. *CCM*

"Feeding a Beam with Co-Ax", By Ralph Barnett, W9UIA, and WQKB.

Since RG/8U became available at bargain prices, many of us have tried to use it for feeding antennas. We soon found that it wasn't the answer to our dreams. It worked in some cases and some it didn't. By gathering all the information available and applying it to our case we came up with a method that can provide a perfect impedance match, is not affected by weather conditions, and can be wound around a metal pipe, or even buried. * A long time ago a quarter wave section of EO-1 cable was used as a matching transformer between the beam and an open wire line. Well this same principle is used in our feed, but, all cable is RG/8U. The quarter wave matching transformer in our case consists of two sections of quarter wave sections of RG/8U in parallel. Other impedance cables may be used or any number of quarter wave sections may be tied in parallel. All sections of the parallel unit should be of the same type however. * The formula for quarter wave section of line is $246 V$ divided by the frequency in mc, and equals length in feet. V is the velocity factor. For polyethylene insulated coaxial line, V is equal to .659. Thus, for 28.8 mc a quarter wave section of RG/8U is 5.62 feet. * The characteristic impedance of the transformer section is figured by $Z_t = \sqrt{Z_l Z_a}$. Z_l is the line impedance and Z_a is the

one

radiation resistance of the radiator. Since we have no way of measuring this radiation resistance, by checking the ARRL handbook we can assume in a three element beam this resistance to be near 12 ohms. Then using 52 ohms coax as our line, the transformer impedance comes out 25 ohms. Two sections of RG/8U in parallel will give us 26 ohms which is close enough. * The standing wave ratio on a four element two tenth spaced six meter beam checked 3 to 1. This could have been improved by changing the spacing of the elements slightly but wasn't considered worth the trouble here. Our feed lines go through a hole in the basement wall then about a foot under ground to the tower which is about 30 feet away, then wraps around the pipe up to the beam. The loading on the final doesn't change any when the beam is rotated or when the beam is wet, which is more than I can say for any other type of feed line I've tried. Also the surplus output into the neighbors AC-DC set has been reduced. * Coupling the coax to the transmitter will be no problem if a small variable condenser is used in series with the shield side of the line to the transmitter pick up link. By tuning out the reactance of the pick up link with this condenser, the loading on the final can be varied without retuning the final tank circuit. Ten mmfd is usually enough for ten meters and six mmfd for six meters.

"The Radio Amateur and His Society" By Cosmo Sivoletta, W9EVR, WGBF.

It is inevitable after a time that a new organization pause for some evaluation of itself. * The yardstick used in measuring the worth of a radio society is not particularly intricate. We are all familiar with the factors which justify the existence of the Radio Amateur and it is only a matter of intellectual honesty to ask ourselves the necessary questions and give each its due, in order to arrive at an accurate evaluation of our society to date. * All the energy expended by any individual toward benefiting the society, though now without any apparent effect, should not be considered as lost. Energy is never wasted when it lends itself toward a goal which as yet may not be included in our own particular concepts of what a society is for. * It is important at any rate that we give allegiance to those forces which support the proposition that Amateur Radio in its setup is necessarily tied in with the public and the community. * As a matter of fact this is probably the basic philosophy for the successful run of any organization. * With this factor for a reference point we can begin to harass ourselves with the necessary questions which will mark us as intellectually honest. * What have we contributed to the community? What plans, programs, policies do we have for the future which will focus some attention and interest in our society? Can we honestly say that we have made any impression on the community? Do we really believe that we can hold the interest and support of members and indeed raise this interest without some public recognition of our worth? * Like a healthy individual, the organization has an ego. And it too needs to be fed from time to time in order to remain healthy red and not fall off into the anemic stage preceding collapse. * It is up to the present core of the society to bring the necessary additions in order to draw into our circle the more timid and frigid, and to make the presently active members feel that at last they have something to aim at.

"The Decibel", By Fay Gehres, W9AIN, President TARS.

The decibel (abbreviated DB) is a logarithmic unit used in communications work to measure power or voltage ratios. It is a useful unit of measure because it is logarithmic and follows the response of the human ear. A power change of one decibel is the smallest change of power which is noticeable to the human ear. The DB is sometimes expressed as equivalent to the loss in power in a mile of standard telephone cable at 860 cycles. * The practical value of the DB arises from its logarithmic nature. The enormous ranges of power involved in communications work, can be expressed in terms of DB's without running

into inconveniently large numbers while at the same time small ratios can still be readily expressed. One DB represents a power ratio of about 1.25 to 1, while sixty DB is a ratio of 1,000,000 to 1. * For any person who uses logarithms the power ratio in DB's is expressed by the equation: power ratio in DB's equals $10 \log_{10}(\text{power 1})/(\text{power 2})$. * Voltage or current may also be expressed in DB providing the resistance is constant for all voltages or currents concerned. The ratios in DB are expressed by the equations: voltage ratio in db equals $20 \log_{10}(\text{voltage 1})/(\text{voltage 2})$; or current ratio in db equals $20 \log_{10}(\text{current 1})/(\text{current 2})$. A useful table of technical db data is handy and given below:

power level db	power ratio to 0 db	power ratio to 0 db watts	voltage or current ratio to 0 db voltage or current
-10	0.10	0.0006	0.31
-9	0.12	0.0007	0.35
-8	0.15	0.0009	0.39
-7	0.19	0.0011	0.44
-6	0.25	0.0015	0.50
-5	0.31	0.0018	0.56
-4	0.39	0.0023	0.63
-3	0.50	0.0030	0.70
-2	0.63	0.0038	0.79
-1	0.79	0.004	0.89
0	1.10	0.006	1.00
1	1.25	0.007	1.12
2	1.58	0.009	1.25
3	1.99	0.011	1.41
4	2.51	0.015	1.58
5	3.16	0.018	1.77
6	3.98	0.023	1.99
7	5.01	0.030	2.23
8	6.30	0.038	2.51
9	7.94	0.047	2.81
10	10.00	0.060	3.16

With the above data, which covers twenty db in steps of one, it is possible to extend the table to any number of db because from observation you can note the power ratio figures repeat every ten db. It is only necessary to move the decimal point one place up or down depending on whether it is a gain or loss of power. An example is minus five db is a power ratio of 0.3162 to 1, while plus five db is 3.1623 to 1 and plus fifteen is 31.623 to 1. Zero level being the reference level in each case. * Changing these ratios to watts with 6 millowatts at zero level the power doubles or halves every three db depending if it is a gain or a loss. * The voltage or current ratios in the final column to the right are different from the power ratios in two ways. First: the figures repeat at intervals of twenty db. For example: minus five db is 0.56234 volts, plus fifteen is 5.6234 volts, and thirty five is 56.234 volts compared with 1 volt for zero level. Second: the voltage or current ratio halves or doubles every six db. * The Weston Instrument co of Newark NJ has a one page layout of "Useful Technical DB Data" which is very convenient. It gives all of the tables given above from minus ten to positive fifty db, plus four additional columns. For anyone studying gain or loss this data is worth obtaining. * The db is one tenth of a bel. The bel is named after Alexander Graham Bell the inventor of the telephone. Finis.

Next meeting of TARS will be held at the City Court Room at the Police Station, starting at 8:00 PM, CDST. Date is Friday 27th of August 1948. Come early for the gab-fest, and final plans for the TARS annual picnic. W9QLW back from vacation-W9BAX still pounding brass on 40-W9GFO at new QTH-W9CVN has new clapp VFO-W9UIA on 420 mc-W9UIS still playing croquet W9DGA about finished with new xmitter room-W9AIN will be on 80 for QSL-three

"How's Your DX?", By Earle Carty Cartwright, W9QLW, WEOA.

Another month of erratic conditions on both 20 and 40 have reduced DX to a few of the old standby's such as VK's, ZL's, G's, F's, etc. QSB has been very predominate on both 20 and 40 with QRM on 40 also. Some Pacific Islands seeping thru around the usual time, 10 pm est, till early morning when a few KA's and J's with KP4's. The afternoons around 3 p m find Europeans among the W's QRM, but you also have East Coast QRM to battle to pull thru the Europeans and West Africans. A lot of patience and maybe loss of sleep will find some VK's and West Africans on forty in early morning hours. 1 am to 7 am. QRM is almost as bad as the problem of QRM tho. * Some of the 20 Meter DX heard are, ZC6LA, Island 143 50 on 20 fone, KX6AF 14070, ZP3AW 14050, PZ1 NB 14040, ISLAHK Sardinia 14060, W4FVI/KX6 14040. * Three more hams have entered WHO'S WHO of DX. W9BBC who not only submitted his first score, but walked right into first spot with 88 countries, and 65 confirmed. Vic you ought to bring your cards, all 65 of them down to one of the meetings, for display. W9MRR and W9GFS also are new additions. W9DGA got his 52nd confirmation the other day with FA8JO's QSL. W9GFO added one QSL to the wall at his shack. W9HQE, the only station to increase his country total from 31 to 33: for the only changes over last months listing. * 40 meters had a home coming flavor this month for W9QLW. We worked W9ALM bill for first time in many moons. Also W9AZJ name of Bob, a local who we hope to meet at the next meeting. Worked W9QLE, Joe at Dubois who has those 813's on with 700 watts. Joe passes along his thanks for TARS paper. Some of you OT may remember W9LDR, Gene O'Bryan now W6LDR in Hollywood around 7000-7100 kc. We have had two nice rag chews with Gene. Gene expects to be around here for a short visit around Sept 15. His rig is a 250 TH final with 250 watts, and HQ129X receiver. According to W9KVE, W9AJK Rothrock is now W4KEF, operates 7100 kc looking for local boys.

"WHO'S WHO IN DX?"

Worked-Confirmed

W9BBC	88	65
W9GFO	81	63
W9QLW	77	62
W9DGA	59	52
W9UIA	59	48
W9WNM	55	45
W9EHU	55	---
W9PNE	44	---
W9HQF	33	26
W9AZU	31	---
W9MRR	27	---
W9GFS	--	10

*Stations please notify
W9QLW of QSL'ed countries.
Gud Luck U DX Hounds.---

Dear Mac:- Will you insert a line in the next TS? I would like to get a 2-BPL CR tube, and, also a half dozen copies of TS anyone would care to donate. Finally worked W1EDN last evening for N H. Leaves me 14 cards to collect and 12 states yet to work. Some Job. 73, Fred, W9FJI.

For Sale or Trade-Howard shortwave receiver and preselector; BC-1068A hf 157-210 mc, speech amplifier BC-614E with 2 mike inputs; receiver built by national BBL2 low freq receiver 15-600 kc. GI recorder and playback unit. 33 1/3 and 78 rpm. Simpson db meter. All kinds of xmitting tubes and parts. Call 34535 H Campbell.*

"Above 50 Mc", By Ralph Barnett, W9UIA, and WQKB.

It looks like the peak month for Es on six for this summer was June. Although July was still a good month the band wasn't open near as often as last year. W9ZHB, Zeering, Illinois made the first WAS on six meters last month, but he doesn't count it, because his South Carolina contact was a portable station, which seems a little silly to us. We are sure counting our ten meter contact with the Byrd Expedition at the south pole, even though they didn't stay there permanently, Hi. The boys are again talking up two meters. Really it is a nice band and not too difficult to get things operating right. Good experience too. It looks like the VHF's are soon going to be crowded as the lower frequencies. * We did get a little experimenting done on 420 mc last month. We have been able to work about 1 mile from the home station to mobile unit with only about 3 watts input to the transmitters. Mac, W9DGA and I are

working on some beams (5 elements) so we should have more dope on this next month. Anybody interested? BC-788's and BC-645's are still available at around \$10. * The following six meter openings were logged here last month. 7th 10 pm New Mexico and California, 10th 5 to 9 pm Texas and Florida, 21st 4 to 9 pm Conn, Mass, Florida, Tenn, Colorado, and Wyoming, 22nd 7 pm Florida, 23 3 to 9 pm New York, Conn, Florida, North Dakota, Colorado, and Wyoming. 24th 6 to 9 pm Florida, 27th 6-9 pm Wyoming, New Mexico, South Dakota, and Nebraska. Worked W4FLW, Dresden, Tenn, (120 miles) ground wave 21 July at 6 pm for a total of 36 states on six meters, with 26 states worked this yr.

"As I See It", By Fay Gehres, W9AIN, President, TARS.

In the late twenties QST came out with a series of technical articles on television. Although the technique then was much simpler than today, a number of amateurs built receivers and were able to receive a picture. Several in this section dropped the idea because of the inherent limitations in the stage of the art. * During the thirties the old scanning disc procedure was abandoned and an all electronic system adopted using the cathode ray principle for both sending and receiving. Now, after some twenty years, we are again in the television game and seemingly are going to stay. With a half decent receiver and an comparable antenna it is possible to get a good picture from St Louis, and Cincinnati is not too far away. Even over this distance which is supposedly out of range we have proven with effort and patience much can be done. Our friends and members now working on television in this locality are deserving of credit and encouragement.

You are invited as our guests at 700 pm September 9th in the KC Hall for an address and illustration for checking video and synchronizing waveforms with a CRO, by S R Cowan, publisher of Radio Service Dealer. * Also a talk by J H Morin, Engineer with Sure Bros., on the story of microphones and phonograph pickup cartridges. Ohio Valley Snd,

The Tri-State Amateur Radio Society will hold its annual Picnic for its members Sunday 12 September at Camp PaHoKa. The Boy Scouts of America, thru one of our members, Fred Sawyer, W9FJI, has allowed us to use the Camp again this year. One thing they make plain is the fact no hard drinks allowed, and we must leave the camp in the same condition that we find it in, which will be clean and orderly. For further information, attend meeting 27 August at the Evansville Police Station.

QRM is bad on the bands these days, but it is not necessary to electrocute our ops to thin the bands down. There have been two cases in Columbus, Ohio where we almost lost some hams. Both fellows wanted to change bands. They snapped off the high power switch and went around and grasped the final tank coil*(& ~~the~~ B L A A T ~~the~~). One conducted 2000 volts to ground thru his hands and was laid up for about a week from shock and bad burns. His relay had stuck. He ruined the final not to mention that he might have been killed. The other fellow took 1500 volts and was burned on the hands. However, he was thrown clear with no damage to the rig and was not laid up. That was luck. He was using mercury switches and the mercury vaporized or shorted and kept the circuit closed. So when you switch to safety, might be sure that switch works. A positive acting plug or main knife switch and a habit of always using same will pay off. We need your money too bad.

Wonder what had happened to "Mobile News and Views", by Jack Grimes, W4LLR, "Ten Meter Mobile", by Neff Cox, W9MDX, "Emergency", by Harold McClellan, W9WNM our SEC, "Your Emergency Coordinator", by Charles Long, W9AZU, "Your Secretary", and "Station Activities" by Vic Chamberlain, W9BBC, and "Ten Meter Forecast", by Neff Cox, W9MDX? Copy by the 10th.
five

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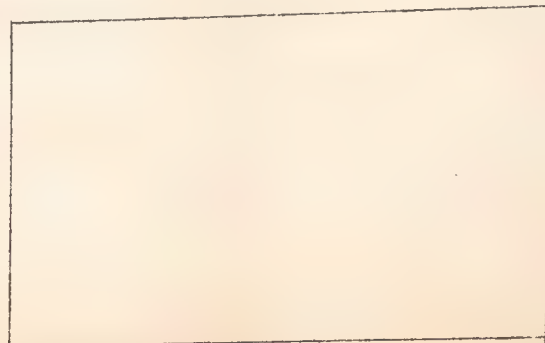
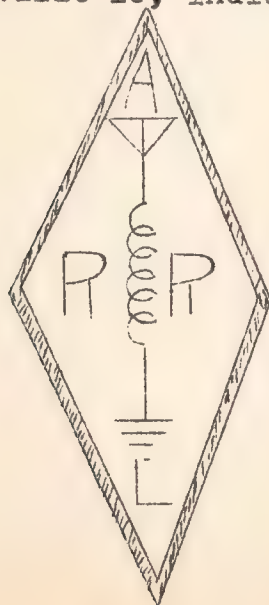
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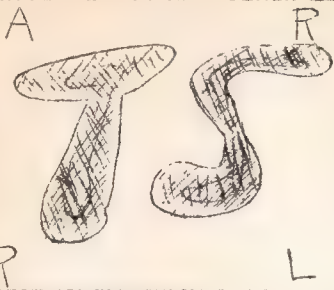
R C A T U B E S * * *

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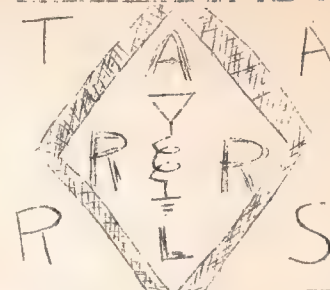


To Open, loosen this staple!!!
Next Meeting 27 August 1948. Pay your Dues at next meeting.
Page six

TRI-STATE AMATEUR RADIO SOCIETY



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SEPTEMBER 1948

Volume 1 Number 5 1948

Clifford C McGuyer, W9DGA, Editor.

EDITORIAL

Well here we are for another issue of TS, a little late than never. This club's QSL contest is really causing a lot of local QRM on 40 meters. W9QLW is really out to win this years test, with W9BFB, a long shot in my book that might come thru to win. Of course I am not letting any grass grow under my frequency. Last years total score will be at least doubled. This is a warning to W9WNM the society's contest judge. Be prepared when the semi-trailer comes with W9QLW's QSL cards. * Say did you see the annual CW-fone ball game at the picnic? It was murder. The fone joe's used two left wingers to no avail. Last year W9UMS was quite a hurler with quite a large strike-out record to his credit, but the year 1948 has taken something out of his hurling. Even the Ole Kap, W9KVE Covert wasn't up to it. Old Bones, W9QLW "The Earle of Cartwright", hurled the CW-ities to a sparkling victory. The final score was some thing around 12 to 2. Big guns for the CW men were ole paratropper, (CVN), Radar Zieg, EHU, scientist Hatfield GFS, and yours truly. It was a toss up as to who hit the most home runs, but it could of been Radar Zieg. On the losing side saw such lip flippers as Chief Scout Sawyer, FJI, CAA McGaughy NKD, the DX Kid, AZU, Mobile Waller, MLL, plus Ole Kap, and croquet player UMS. There is a rumor around that the fone boys out pulled the cw men in the tug of war. Rumor confirmed. See you all next year at the annual picnic. *c.c.m.*

"AS I SEE IT" By Fay Gehres W9AIN, President, TARS.

I regret to announce the resignation of J Grimes, W4LLR, as Treasurer of our Society. Due to the pressure of business at this time of the year he was forced to request replacement. I hope that he will be with us as much as possible. * The operating contest between members is now in full swing and I have been assured by no less than five members that they are out to establish a new championship for 1948. The surprise members haven't been heard from but they are going to make last years score look small. More power to you.

"YOUR SECRETARY" By Victor Chamberlain, W9BBC.

I wish to take this opportunity on behalf of the Society to welcome the following new members. Charles Green, and Chuck Daugherty. I hope you enjoy our Society fellows and help us to make it a worthy organization. * I have received Society order blanks to QST and anyone wishing to order through the Society at \$3.50 per year please contact me. * Sorry I wasn't at the August meeting gang, but have all minutes up to date. * Still have a few decals left. Danger High Voltage--need some?

Official Bulletin Nr 152 from ARRL Headquarters. Your attention is invited to the approach of the annual opportunity of the amateur service to demonstrate its ability and willingness to render Public service: the nationwide Simulated Emergency Test. This event, to be held this year on Oct 16 & 17, will provide new opportunities for the maintenance of liaison with the agencies we serve. Participation, will be under your local EC. See C Long, W9AZU for further information.

"HOWS YOUR DX?" By Carty Cartwright W9QLW, WEOA.

The annual Society contest has put a crimp in yours truly's activities. Here are a few picked up in the heard dept. IALAOH, 14010 Genoa, ZP2DG 14090, ZP3AW 14015, VR2DB 14200, YV1AZ 14075, PZ1FM, FK8AB 14025, VP3AC 14030, VP4TZ and ZS5FE 14100.

WHO'S WHO IN DX?

Worked--confirmed

W9BBC	88	65
W9GFO	81	63
W9QLW	77	62
W9DGA	59	52
W9UIA	59	48
W9WNM	55	45
W9EHU	55	23
W9PNE	47	26
W9HQF	36	26
W9AZU	33	23
W9MRR	27	**
W9TBU	15	**
W9FJI	5	2
W9GFS	**	10
W9CVN	5	2

Gud Luck U DX Dogs.

I wish some of you ten meter men would pass along any information on those rare ones on that band. Of course any DX is OK. Did manage to work ZS5FE on 20 and KS4AH plus PY7WS and a few KH6's on 40 CW. W9GFO reports that forty has signals around 2200 from I, G and LA's. W9CVN joins in the DX with CM, KL7, KH6, and W, and VE. W9AZU was flashing the Halicrapers VQ4 QSL at the August meeting. Nice going OM. W4HPM dropped in WEOA the other night for a visit on way back to St Petersburg Fla. Indiana net QIN is open for business on 3656 kc on each week day at 630 PCST. W9TBU Bob, over in Mt Carmel, entered DX'x Whos Who with 15 countries worked. How many confirmed Bob? Also W9FJI new in List. GE. Seems like W9HQF up in Newburg is our most consistent improving member each month. Added 3 over last months listing FB OM.

Would you like to measure the actual power consumption of your rig? Look on the face of your watt-hour meter, and you'll find a Kh factor listed there. Then use this formula. Watts- 60 Kh R. Where Kh as found on watt-hour meter. R- Revolutions of drum in one minute..Note: When making this check be sure to turn off all other electrical appliances and lights. --John H McGaughy, Jr., W9NKD.

"STATION ACTIVITIES" By Victor Chamberlain, W9BBC.

W9FON/4 has a swell sounding ring on 28 mc and is putting up a new beam.* W9DDV has a new jr operator-Thomas Bill. Congrats Bill. When are you going to come down to our meetings Bill? W9BBN has just returned from a vacation in Colo. Bob had some good old 40 meter cw portable. Nice Going Bob. * W4PKX had a vacation in Bowling Green. Wonder if he is a Dixiecrat? * W4LQV the Barron of Zion has a new 28 mc rig using 829B final and Coaxial verticle. Also putting up new beam at new location at "Gobblers Know" 3 miles from Zion, Ky that is. * W4JVB converted his ham shack into an apt * Would rather have money than operate, Shorty? * W9AZU and W9BBC got some of the early fall dx on ten last sunday. A few G's. W9EHL has been very ill and we hope for a speedy recovery John. Wonder if John will QSL for our local Society QSL contest? Will let you know soon -Ed. * W9BLE the Big Lazy Fellow has moved to Henderson and hasn't been heard from since. Maybe he found some of that 4 Roses. W4JQV has a new 5 element beam on ten. W9SWN will soon have a beam for ten. * W9AZU our local EC, hopes to be in new QTH soon. W9MRR has a beam rotator and direction indicator installed that is reported to work FB. * W9THD has a new car and really has mobilitus. W9KMI and W9ANG recently installed Taxi radio at Princeton, Ind** W9FAK has a new Meissner 50 B at a bargain. W9BAX still pounding brass on 40 cw. W9ERN was heard on 80 cw other morning. W9CVN has new McMurdo Silver Standing Wave meter. W9CVN also has the DX bug. W9QLW and W9DGA are having a RAT race in our local Society QSL-Test. W9RDJ back home and on 40 for a week then to Indianapolis to install equipment for WE. W9BFB burning the midnite oil in club QSL-test. W9UIA on 420 mc. W9UMS practices croquet hours on end in effort to defeat W9UIA and W9DGA. W9HGJ has best TV set-up anywhere in this locality. W9PNE working DX on 20 CW. W9GFO nightly on 40 cw.

"REPORT FOR TS" By Brice Anderson, W9PNE. (Andy).

I Celebrated my 30th birthday and also my 17th anniversary as a ham in August. Now that I'm out of my twenties, I feel that I am qualified to go on phone. Hi! * Been too busy and too hot in the shack for much radioing. My log shows that in July and August I operated a total of $9\frac{1}{2}$ hours. Below is a tabulation of my DX, worked with my 380 211 with 250 watts input on 14 mc cw. DX calls made-50-DX stations worked-20- % successfull DX calls-40%(thanks to ECO). % successfull 1st DX calls made in each operating period-70%- Conclusion: It is best to give one call then go to bed, Hi). List of stations worked, VK2GW, VK2VN, VK3UQ, VK3XO, VK3LG, VK4NQ, I10J, I1ARK, I1XK, HB9MZ, ZS6TC, D4AFZ, VO2CD, OA5XX, OA4CS, OA4CJ, VP5MO, NY4JB, OH6NZ, SM8VC. Now have worked 47 countries postwar plus one ship. 26 countries confirmed. * My antenna is 66' center fed with maximum lobes east-west. Use 33' verticle folded dipole in conjunction with horizontal to work north & south. Receiver is 2 tube regen with 1852 converter ahead, no RF stage. * My 6 meter beam looks bad on the ground. It broke so I took it down. Am nearly done with tower to support 10 meter rotary beam.

"ABOVE 50 MC" By Ralph Barnett, W9UIA, WQKB.

The coming of September changes a good many VLF hounds to 10 mtr DX hounds and that is what is happening to us. The peak month this summer for 6 meter Es signals was July. The band was open only a few times during the 1st part of August. We had a northern light skip on August 8 and heard who, ohio, wis, and ill. Aug 10 from 8-9PM heard wyo and idaho, then at 8 pm aug 14, colo. Long haul ground wave will soon be coming in on 6 and 2 meters with a rare Es session on 6 will probably be the menu until next spring. If the 6 meter band is anything like last year, some DX contacts with Europe may be made during the next few months.. So we will stay on 6 & 2, but will add a little 10 to our activity the next few months. * The 420 experiments are still continuing. We worked W9DGA last month for the first station to station contact. (2 miles). We found that 420 signals follow line of sight paths. With my antenna up 45 feet and Mac's up 10 feet, no signals were heard. Signals were R9* with Mac's antenna raised to 20 feet, then Mac ran out of cloths props. Contact has been maintained over distances of 5 miles from mobile unit to station with 5 element beams used horizontal on each end. An attempt was made at a contact over a 12 mile path from W9UIA to W9HGJ with no contact up to the present time. We are using converted army gear BC654, BC 788 and APS-13 in these tests. The transmitters run about 4 watts input to mod. oscillators. Receivers are super-hets with high IF freq's. (30mc). 73/.

"YOUR EMERGENCY COORDINATOR" By Charles Long, W9AZU.

Nothing to report except that local RED CROSS, L & N, and C & E I Railroads, Western Union have been notified in writing of amateur services available in event of failure of regular means of communications. ARRL soon to announce simulated emergency drill for this month. Would like more Tri-State hams to join AEC. I have list of equipment at Evansville College and Naval Reserve Armory, available for use in event of emergency. Join AEC today. Are you prepared?

Here is a good one Bee Cartwright is telling:

Bee Cartwright: "Are you ready yet, dear? Dinner is getting cold.."

Carty Cartwright: "I wish you would stop nagging me. I told you three times in the last hour I would be ready in a few minutes."

Watch* for feature article next month by Ralph Barnett, W9UIA on VHF Converter for AM, FM, and NFM. Uses two 6C4's and a 6BE6. See it. It is with great happiness that we announce the election of N D Covert W9KVE, well know local amateur, Captain of Radio for the Evansville Police Department, Treasurer, to fill the remainder of J Grimes term. Mr Covert has always been a helping hand to many newcomers to ham radio in this area. So pay your dues now. He has a tuff job on hand but we are sure he will get things back in shape. Congrats Lefty.

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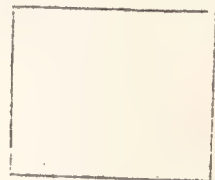
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 OCTOBER 1998
 27 - BE THERE!
 WEDNESDAY



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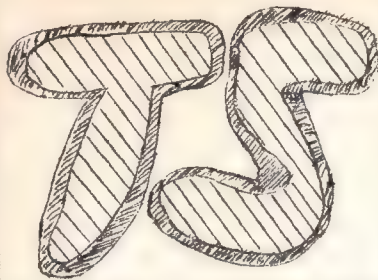
Pay Your Dues - Lefty

To open, loosen this staple

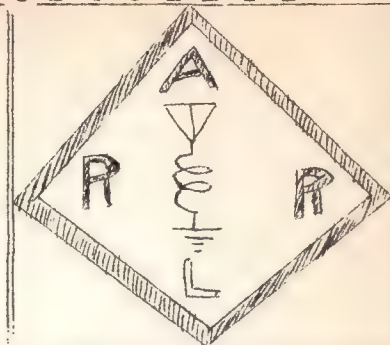
Pay your dues, Now.

page four

Pay your Dues, Now.



PUBLISHED MONTHLY, AS ITS OFFICIAL ORGAN BY THE TRI-STATE AMATEUR RADIO SOCIETY, AT 1321 SOUTH GOVERNOR STREET, EVANSVILLE 13, INDIANA. AFFILIATED WITH THE AMERICAN RADIO RELAY LEAGUE. DEVOTED TO IMPROVE THE AMATEUR RADIO OPERATOR.



OCTOBER 1948

VOLUME 1 NUMBER 6

Clifford C McGuyer, W9 D G A Editor

EDITORIAL *

Trying to squeez out another issue of TS in the middle of the Societies QSL contest is quite a job. W9EFB, W9EVR, and W9QLV are the leading contenders so far in the contest, with a half dozen other stations headed by W9GFS are coming up along the side. The Cleveland, Nashville, and Chester Pa., clubs are also having contests similar to ours. If there were a half dozen more stations on 40 CW in contest we would really get the Society a lot of publicity. Everyone you work say "Are you in the QSL contest?" * We can always make room for your article in TS. Send yours before the tenth of the month to me. * A new item in TS this month is a picture of the DX Dog Editor, as seen thru the eyes of Jim Barrow, W9CVN. * Next month's headline article is one by Phil Hatfield, W9GFS. Phil has whipped up a little Gem which will do everything except keep your log. * "Above 50 Mc" will not be in TS this month. Ralph Larnett, W9UIA, the hf editor is on a two weeks vacation in Wash DC, NYC, and Canada.

"YOUR SECRETARY" By Victor Chamberlain, W9BEC.

The amateur ranks in this area are growing by leaps and bounds. I wish to take this opportunity on behalf of the club to welcome the following new amateurs who have just recently received their tickets. W40GB, Jack Rudy, Henderson Ky, and the OL W9PLU, Eloise Rheim, Carmi, Ill., also the old timers W9QQ and W9HX, "Bake"/. Hope you fellows will join our society. * I get around the tri-state area quite often and always make an effort to personally extend an invitation to the new hams to the meetings. If you hear of any new hams please fone 3-7895 so I may be sure they get a meeting notice. Don't forget to get your ballots in on time for electing a director from our Division. Order QST at club rates N O W!

AS "THE OLD MAN" SAW IT.

Every now and again somebody starts trying to pull apart our ARRL because Hqs has sone or has not done something or other. Whose ARRL are they trying to pull apart? Is it Hqs ARRL? Not a bit of it. It is your and my ARRL and the other fellow's ARRL they are pulling apart. Hq is our office, and it is occupied and run by those we hire and pay to run our affairs. You and I and the other fellow elect every so often our representative, to sit with the representatives that the rest of the country elects. These representatives are called Directors. They meet and agree upon what is best for Amateur Radio AS A WHOLE. When they have decided by majority vote, Hqs is told what to do. * "Now suppose someting was decided that somebody does not like. Does it help very much to start pulling ARRL apart? Your Director and mine and the other fellow's had his say in the matter. All the other Directors heard him. The whole Board gave c areful though to the subject and voted. The majority vote prevailed, as it should. * Consider our country itself. When we elect a Congress of these United States, we discuss and argue and study and then vote. The represent-



"WHOS WHO IN DX?"

W9BEC	88	65
W9GFO	81	63
W9QLW	77	63
W9DGA	59	53
W9UIA	59	48
W9VNM	55	45
W9EHU	55	23
W9PNE	47	26
W9HQF	44	31
W9AZU	35	24
W9GFS	--	10
W9MRR	27	--
W9TDU	15	--
W9BFB	8	6
W9FJI	5	2
W9CVN	5	2

folded dipoles for LW, and NS. It must be doing some good as Al has increased his total to 44 worked, and 31 confirmed. Larry, W9BFB, has entered Who's Who with 8 countries with DX, G2, KP4, Co2, KZ5, Ve3 confirmed. Tnx for the dope and welcome to Who's Who. * The CQ DX contest is on soon. See "CQ" for Dates. This should be a chance to run up your totals. Would you like to work DX? See Al, W9HQF.

"EMERGENCY CORPS DOINGS" By H E McClelland, W9MWN, SEC.

As this is written the national simulated emergency is drawing to a close. Of course it is too early to evaluate the results, but it is hoped that the contest will demonstrate to the nation the effectiveness of amateur radio in times of emergency. * The reorganization of the AEC in Ind is well advanced, but far from complete. Many inactive EC's have been taken from the lists and replaced. W9GWL, Russ Price has been appointed for S. Labash Valley as EC. W9CKP of Indianapolis has a good mobile net. They are always prepared. This is fine work. Here are the Ind nets. CW-QIN 3656 kc daily at 6:30 PM Phone net 3905 Kc Tues and Thurs 6:30 PM and 9 Am Sunday. * The E town post office has recently reorganized its RR in and around E'ville. If you have a new RR # you must send in your ticket for modification. The FCC considers that you have a new address, exactly as the U moved.

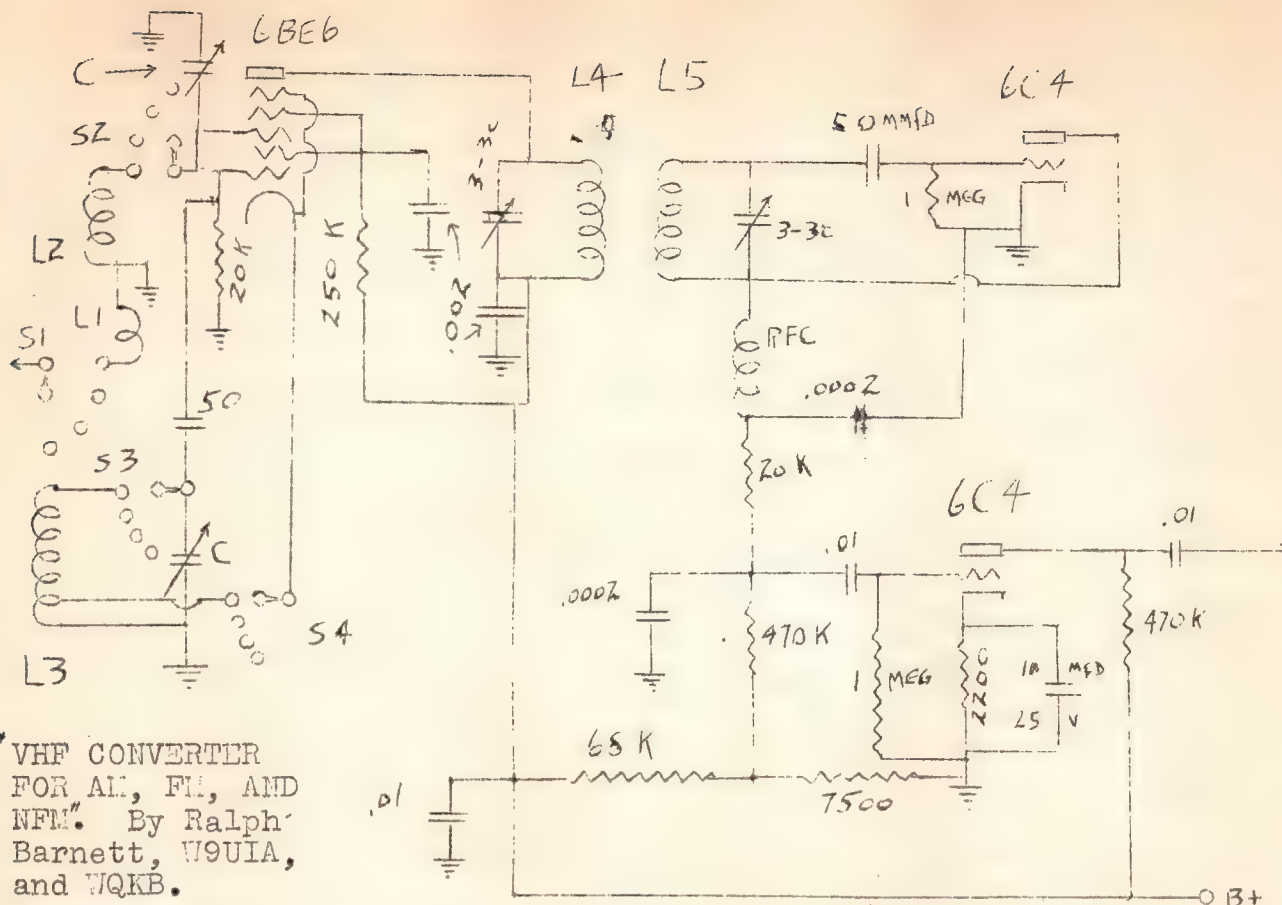
"STATION ACTIVITIES" By W9BFC. W40G is all set to be on 28 mc soon, with a BC 610 and a commercial beam-W9HX runs 800 watts on 28 mc and a beam out of this world, complete with selsns, etc.--W9FLU, the OW from Carmi is on with 50 watts on 28,960-looking for E'ville.--W9UNT has a new rig on ten-813 final.--W9DCI, the fellow no one is interested in.--W4LQV is rebuilding the big rig--W9GWL the mayor of griffin is on 75 and has forsaken 10.--UHS building a new rig--4JQV got rid of his feed back.--9EJS has a globe trotter rig on ten.--9MRR has cold. Over.

atives and senators getting the most votes are elected. Then, when these representatives and senators go and decide something you do not like, do you start trying to pull apart the US? Not at all. Our US would not be where it is if we did. * When election comes around again you vote for a different representative or senator. If a majority of the rest of your fellow citizens think as you do, a different representative or senator is elected. BUT, if you are in the minority, they return the same representative or senator. That is majority rule. You are obviously on the wrong side of the fence. * In certain foreign countries they start pulling their government apart when an election does not go their way. There are all kinds of factions. But this is the USA and we do not run our affairs that way. * Have you ever stopped to think what the effect would be were we radio amateurs to adopt these other methods? We would have some twenty or thirty different warring amateur radio organizations all shouting at each other, calling each other names and demanding different things. What do you suppose our authorities would do under the circumstances? How far would amateur radio get?"

--- Hiram Percy Maxim, W1AW, Sept. 1929

"HOWS YOUR DX?" By C Cartwright, W9QLW.

Don't know how ur DX is, but mine is null and void, irrelevant and besides the point. In other words, None. * Got a letter from W9HQF and a card from Larry, W9BFB, with some dope on DX. Al now has a Millen VFO, and two



VHF CONVERTER
FOR AM, FM, AND
NFM. By Ralph
Barnett, W9UIA,
and WQKB.

After trying to get a fremodyne circuit working on the ham bands without much success we decided to try and feed a mixer-osc into a super-regen det. No unusual trouble was had getting a 6BE6 working with bandswitching and coils for 10, 6 FM, and 2 meters. It oscillated OK even on the 2 meter band. The osc is tuned 24 mc off freq from the grid of the mixer to give a 24 mc beat. With the plate of the mixer and tank of the super-regen tuned to 24 mc the coupling of the coils was adjusted for maximum output. If the super-regen does not operate, increase the resistance of the 7.5 K ohm resistor, thereby raising the E_p on the super-regen. Since the audio of a super-regen det is rather low, a 6C4 was used as an audio amp, then feed into the audio system of a receiver. * We have been using this converter in our car, using the pwr supply and audio in our auto set. With a super-regen detector we have no motor noise. Note. Tuning condenser C is a dual15 with one plate removed from the RF section. Following are the coils used.

L	Coils	28 mc	50 mc	88 mc	144 mc
1	wound over L2	4 T	3 T	2 T	1 T
2	#16 3/8" Dia	18 T	9 T	3 T	1 T
3	#16 3/8" Dia	10 T	8 T	6 T	3 T
4	athode tap from gnd	3 T	3 T	2 T	1 T
4	10 turns #24 wire 1/8" dia tuned to 24 mc.				
5	30 turns #25 wire 1/8" dia tuned to 24 mc.				

STATION ACTIVITIES CONT'D.--(9ERN has been very active on ten. 9UYT is an old timer back on ten with co ax vorticale. 9ANZ of Mt Carmel has joined Electronics Reserch gang.--9HQF was on ten meters for a short time, what happened Allen?--9AZU has been getting his share of the D4's.--9CKO took his beam down in favor of TV.--9GZL is known in the Army as Gildersleeve. The other day 9QLW went to sleep in the barber chair and got a crew cut. (9PFH a new ham is on 40 CW-nice going OB.--9CVN is a cartoonist.--9GFO has a clap oscillator. 9WZK going to EC. 9WZK will have a Campus Chatter on EC next issue. 9GFO and 9BAX on 40 and 20 mtr CW. DON't forget next meeting on 27 Oct 1948 at the Police Court Room. There will be an auction sale for members. Bring items you want to sell or trade. CUL.

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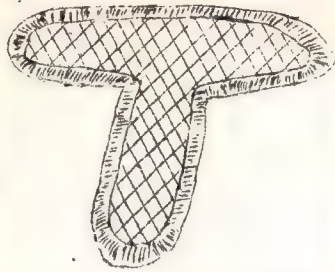
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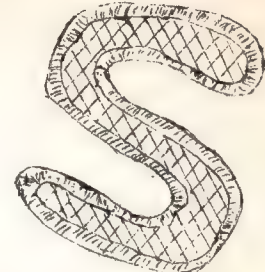
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August 1948

Volume 1 Number 7 1948

Clifford C McGuyer, W9DGA, Editor.

E D I T O R I A L

Looks as if the score to win this years "QSL Plaque", one will have to score twice as many points as last year. 418 cards was a lot of QSL cards last year, but with that score this year you might place third. W9QLW, W9BFB, W9GFS, and W9EVR are really in there QSLing.

Now is the time to think about officers for next year. Give consideration to W9UMS and W9UNM for president and vp. For Treasurer how about W9AZU and W9EHU? For Secretary, Vic is doing a bang up job, so W9BBC and W9QLW(ole bones). This will give you something to think about. C.C.M.

"YOUR SECRETARY"

By Vic Chamberlain, W9BBC.

I wish to take this opportunity to welcome the new members to our Society. W9HX, Bake Baker, and W9UYT, Van Norwood. The auction held last meeting, proved to be a big success and was good for \$5.16 into the treasure. Why don't we do this more often? Fellows I wonder just what we as a Society, group, or organization can do to help our jr or swl members to get the necessary training to get their own ticket? New men should be told something about ham radio. How can this be done? A committee of capable men in our own group to lay a plan for code practice, circuit discussions, and rules and regulations. Even if necessary have a 15 minute discussion period after our regular meetings. Plan a code practice session before each

meeting. Lets help these boys before they loose interest. Most amateurs as individuals consider it a privilege to help the beginner.

Why can't we as a Society do as much? National Radio Week this year is being celebrated Nov 14-20, gives us an opportunity to get publicity and public good will for ham radio. We have been offered time on the local stations, also plenty of newspaper space. Have plenty of application blanks and make this plea for new members. Pass the word along and help to expand TARS. Order Q S T at club rates and I'll be Q'ing you. 73.

"W A E" AWARD

The editor of TS is happy to announce an award to be known as "WAE", Worked All Evansville. Most other organizations have been giving this type of award for years. The rules are very simple. Present to the editor, ten QSL cards from hams living in E'town, or having an E'town address, such as Phil Hatfield, RFD 8, Evansville, Ind. Five cards must be from stations using phone, and five cards from stations using CW. Cards must clearly show contact was fone or CW. Include postage for your cards to be returned, and receive a beautiful award for your shack wall. A monthly listing of WAE award holders will be listed in TS. Getyours today. WAE, TARS, FB OM.

W9NKD takes a step up the ladder of success with CAA and is QSYing to Chi. Come back sometime Mac. Don't forget next meeting at the KC Hall.

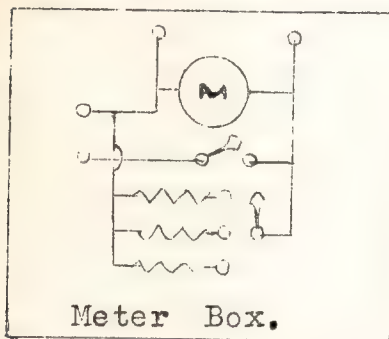
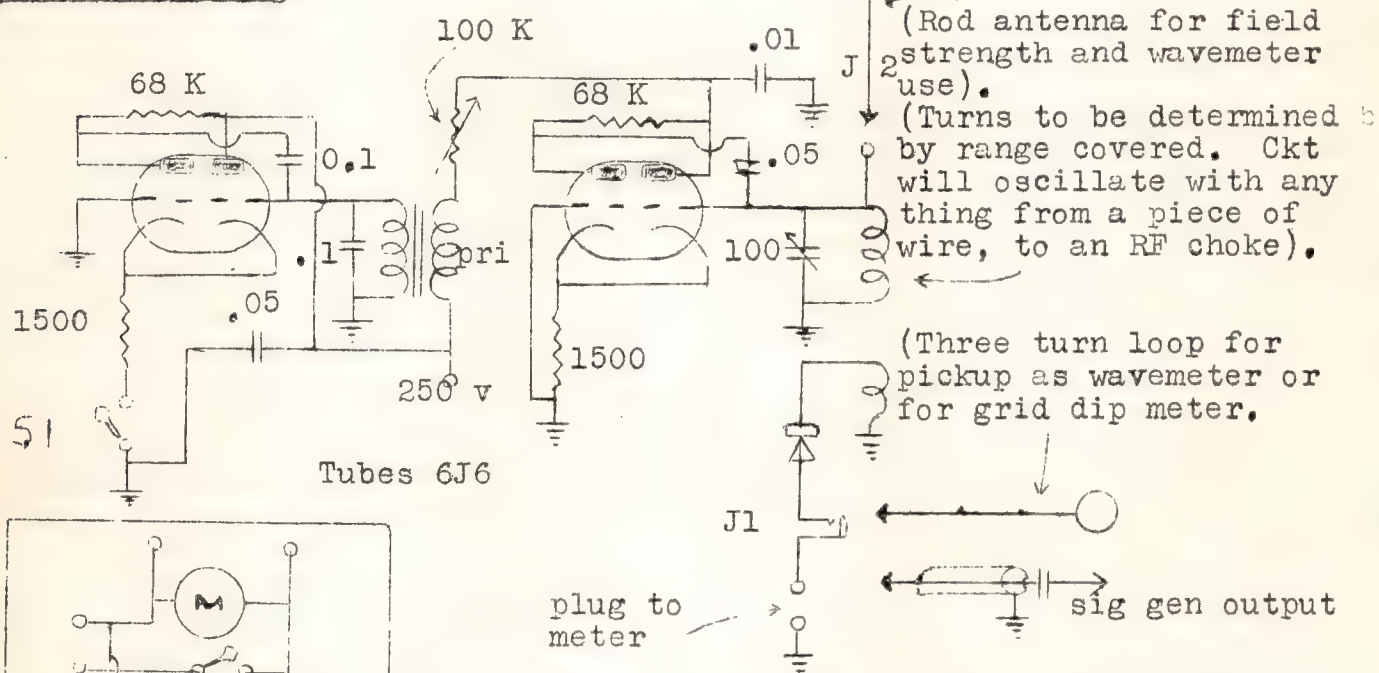


"THE SCOTCH MILLIAMMETER"

By Phil Hatfield, W9GFS, Engineering Services, Inc.

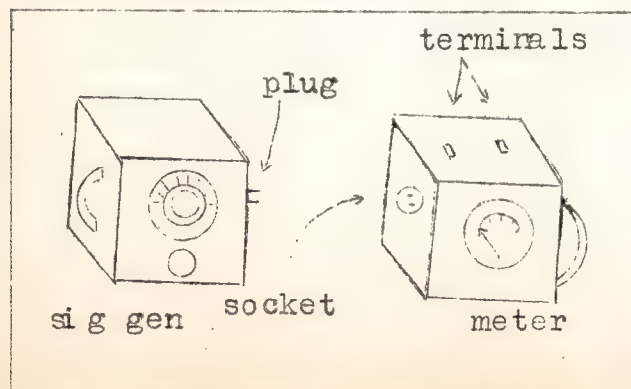
To begin with this not an original idea. The gadget is similar to one in the latest ARRL hand-book. However, I thought some of the changes might be of interest. I have always disliked putting one-mil meters permanently in anything which was used only occasionally; hence, the following "Scotch" system.

The one-mil meter is mounted in a 3" x 4" x 5" box with a switch and a set of multipliers to increase the range to 10 ma, 100 ma, and 1000 ma. A 4-prong socket is mounted on the side of the box and is connected through a switch to the meter. (In addition terminals are provided for conventional connection.)



Various devices requiring a one-mil meter are constructed with plugs on the sides of the boxes for connection to the "Scotch" meter. So far I have constructed a signal generator, grid dip meter etc., and a standing wave meter to be used with the plug-in meter. The gadget diagramed is

a signal generator, grid dip meter, wave meter, and a field strength meter. The cable with a condenser in one lead is plugged into J1 when the unit is used as a signal generator. Switch 1 controls the audio modulation of approximately 1000 cycles. When the unit is used as a grid dip meter, the cable with a 3 turn loop is plugged into J1. For field strength use a plug with a 2 foot rod attached is inserted in J2. For wavemeter use,, a rod of about 3 inches in length attached to a plug is used in J2. Plate and filament voltages are necessary for signal generating and grid dipping but not for field measuring or wave metering. 73. Transformer is a mike transformer.



W9ERN sold \$27 dollars worth of used equipment at the last auction. That must be his second occupation. W9BFB in radio class at Central High.



"HOWS YOUR DX?" By Carty Cartwright, W9QLW, W60A, W9FWY.

W9PNE, our only contributor worked KM6AU and OE5FS for two new countries. Andy supped his confirmed total to 28. Due to an earlier deadline of TS this month we missed word from W9HQF and other "WHOS WHO". W9PNE lost his antenna due to winds and has been off a lot due to hay fever. Andy is toying with the idea of an 8JK for 40 and 20. Andy is planning a 24G final, 100 watts, driven by his shifter for the SS contest. Nows the time to get out and check those rotating mechanisms, insulators, feed lines, and soldered joints on the antenna. Even now good weather is at a minimum. DX season is high, and the

"WHO'S WHO IN DX?"

W9BBC	88
W9GFO	81
W9QLW	77
W9DGA	59
W9UIA	59
W9WNM	55
W9EHU	55
W9PNE	49
W9HQF	44
W9AZU	35
W9MRR	27
W9TBU	15
W9GFS	**
W9BFB	8
W9CVN	5
W9FJI	5

*stn pse see (W9QLW)

65 a good past time. Heard EK2AA and AC9AA which I think was a foney, on 20. Forty is alive with VK's and ZL's early mornings. W9QLW is hoping to get back to dxing in earnest in december. Thats all for this issue and drop a line to "Who's Who" regarding your dx activities. 73. Carty, W9QLW.

TARS ANNUAL QSL CONTEST. The following list of stations are eligible for QSL-TEST, and maybe counted as two points for the contest. Don't forget to get your QSL cards to W9WNM before end of December. W9's UNT, PNE, HQE, UIA, QJW, BBC, EJG, MDX, ERN, ENZ, AIN, GFS, RCD, MRR, PCJ, AZU, WNM, NKD, DGA, TBU, AMZ, ZZY, FJI, EVR, PBE, EHU, HX, UTY, BLO, FFH, BFB, KVE, AND BBN. W4's, JVB, MXX, and PKX. Five nice awards to the top five, with the winner getting to keep the Plaque for a yr.

TARS MEETING. The November meeting of TARS will be a dinner meeting at 7 pm in the Marine Room of the Knights of Columbus Hall at the corner of Court and Market streets near the Coliseum. The price of the meal will be \$1.50, and reservations must be in by November 13, 1948. The meeting notice which you receive from the

miniature jackpot. (Remember it may pay for your meal and leave enuf for a surplus 24G). If your notice is lost in the mail, drop a card to AW (picture at left, bottom) Schoettlin, 408 Lewis Avenue Evansville, Indiana, requesting a reservation. DATE: 17 NOVEMBER.

"STATION ACTIVITIES" By W9BBC.

AZU moved to new QTH, off for a while...DFD and group went to Chi for a radio conference...GZB moved to new QTH in Arcadian Acres, plan to be on air soon...JUJ has re-entered naval service. YPF is putting up new beam, also ZZY. 4LQV had trouble with a skil-saw, get well fast Stu...THD is putting a Halo antenna on his car..BBN off for a while-moving..SWL Ganley hearing lots of DX.pse snd reports to W9QLW of DX OM..SWN gave talk at National Guard meeting...Who will be first to try the QUAD??? Pse send me reports..4JQV off with big rig-uing small silver rig..40GB has HRO es ART 13...W9UMS is rebuilding..UIA home from vacation. WCVN looking for electronic keys. DGA has keyer for contests..AZU plans to get back to his olelove40.



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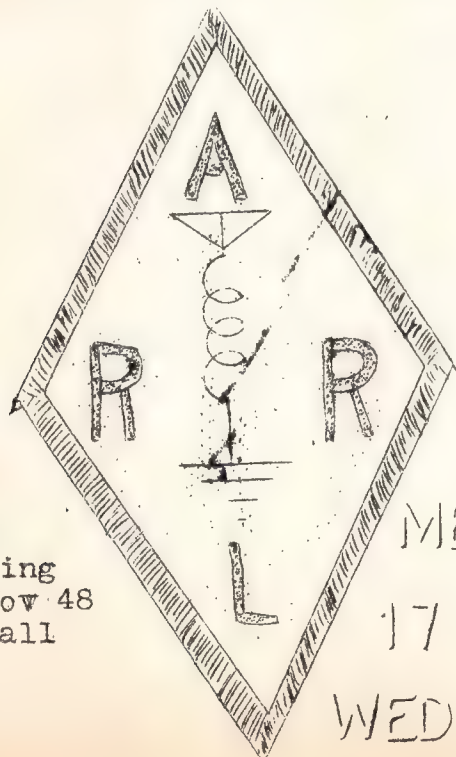
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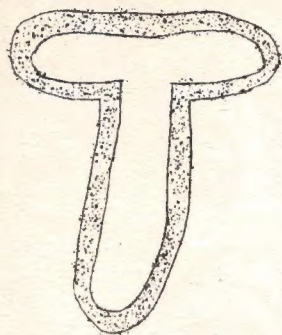
TS, (Tri-State Sparks),
Tri-State Amateur Radio Society,
Clifford C McGuyer, W9 DGA, Editor,
1321 South Governor Street,
Evansville 13, Indiana. Phone 5-8527.



Next
Meeting
17 Nov 48
KC Hall

NEXT
MEETING
17 NOV 48
WEDNESDAY

AMATEUR RADIO STATION



Published monthly, as it's official organ, by the "Tri State Amateur Radio Society at 1321 South Governor St, Evansville 13, Indiana. Affiliated with the American Radio Relay League. Devoted to improve the Amateur Radio Operator.



MERRY CHRISTMAS

DECEMBER

Clifford C McGuyer, W9DGA, Editor. Vol. 1, Nr 3, 1948

EDITORIAL

With this the December issue of TS, it will be my last issue. Election of Officers will be held at the coming meeting, and the new President will appoint a new editor. I would like to thank W9QLW, W9UIA, and W9BBC for submitting at least one article per issue. Also for one or more articles, W9's AIN, NEC, AZU, WNM, IDX, ERN, GFS, EHU, KVE, PNE, W4LLR, H Campbell, and Robert Funkhouser.

So far three "WAE" awards have been issued to W9UIA, W9QLW, and W9DGA. Any more takers? Don't forget to get your QSL cards to Judge W9WNM on or before the 31 Dec. He lives on North Ky Ave.

"AS I SEE IT"

By Fay Gehres, W9AIN, Pres. "TARS".

With this issue of TS we come to the end of another year, the 2nd since our reorganization early in 1947. The holiday season is with us and it is my desire to extend to each and every member, wishes for a Merry Christmas and a Happy and Prosperous New Year. December 29th we shall have our annual Christmas party when we are to have our wives, sweethearts and children with us. Make this a date!

I should like to take this opportunity to express my appreciation of the fine work which has been done during 1948. Through a year filled with many new problems and difficult situations, the work of the society has created a new solidarity and made it possible to look confidently to new gains in the

future. We shall have many problems to solve in 1949 but none of them will be insurmountable if we continue to face them aggressively and with a spirit of cooperation. Any success that we have had in the past or may hope to achieve in the future depends ultimately on you. In a democratic organization, the wishes of the majority of the membership determine the course of its leadership. During 1949 your officers and committees will need your support and cooperation even more than in the past if you are to achieve the goals and aims we have set.

In conclusion I wish to thank all of you for your support in the past year, and for having given me the opportunity of serving you.

"YOUR SECRETARY"

By Vic Chamberlain, W9BBC.

Seems as though a lot of the local amateurs are still having a lot of difficulty in receiving their QSL cards. It is surprising how many cards are mailed just with call letters only. To try and aid the local post office in this matter I have made an up to date list of all amateur call letters and correct mailing addresses and gave it to Mr John Bainickle at the main Post Office. He will see that this list is used and I will send any corrections or additions to him. I wish to thank Mr Bainickle for the Society for this service. Merry Christmas and Best Wishes for lots of DX for the coming New Year. Order QST at Club rates today.

"HOWS YOUR DX?"

By Carty Cartwright, W9QLW.

Looks like DX is beginning in full swing now that cool weather has arrived. We are gratified by reports from the gang. W9UIA got back on ten fone and came up with WAC in 6 hours and 20 minutes. No Bad OM. To top that Ralph added six countries for a total of 65 to pull into 4th place in the standings. New ones include KALAC, YS2AG, CP5FA, ZB2A, E17A, and an EI, plus a new Baby.

W9CVN snagged a G5 on 40 for #6. W9EHU added to the total on 20 with a YU for 56 worked with 24 confirmed. W9DGA sandwiched a KP6 in between contest contacts on forty for #60. Pore OLE QLW hasn't had a D X QSO for many moons besides getting CW jitters in the club contest(to no avail).

9PNE hasn't been on much lately so no DX has new antennas for last SS tho. Also did get a G6 on 40 during the SS. W9FJI sent in quite a list of DX heard from SWL Ganley at Boonville, ZS5D, ZS6LU, CT1QA, ZE2JH, OQ5AB, E16A, LX1AI, and ZL6KD(New one on me, never heard of a ZL6. Fred now has 6 countries, with 5 confirmed. Where is W9HQF this month? No list from Al, must be too busy kilocycle cruising. Did you notice the lack of W4's in Whos Who? Good luck you DX Hogs.

"WHOS WHO IN DX?"

1.	W9BBC	88	65
2.	W9GFO	81	63
3.	W9QLW	78	64
4.	W9UIA	65	50
5.	W9DGA	60	53
6.	W9EHU	56	24
7.	W9WNM	54	45
8.	W9PNE	49	28
9.	W9HQF	44	31
10.	W9AZU	35	24
11.	W9MRR	27	10
12.	W9TBU	15	10
13.	W9GFS	15	10
14.	W9BFB	8	6
15.	W9FJI	6	5
16.	W9CVN	6	2

"NEXT MEETING"

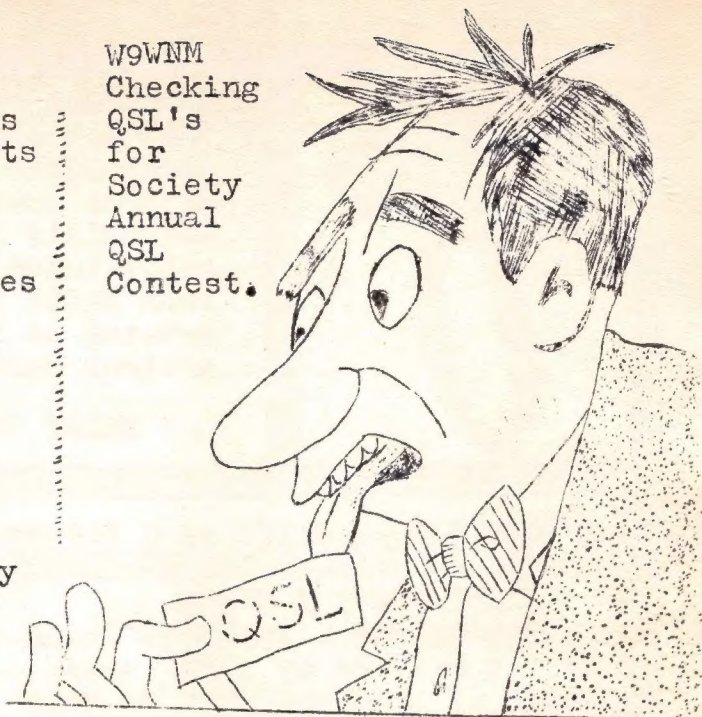
Date 29 December 1948

Place Y M C A

Time 7 3 0 PM

MERRY XMAS

W9WNM
Checking
QSL's
for
Society
Annual
QSL
Contest.



"ABOVE 50MC"

By Ralph Barnett, W9UIA, WQKB.

When the 6 meter band died along about the middle of August it really folded up. Nothing was heard here during Sept or October. Nov 9 the band was open to Wyo for about 2 hours and hasn't been open since. We worked W9GWL cross band 6 to 75 but he still hasn't heard us on 2 meters. W9UNT was testing on 2 meters 23 Nov with a good signal but we didn't make contact. 420 Mc experiments stopp- ed with the cold weather. The best 420 was worked with w9HGJ at his home nw of Parker Settlement from Reitz Hill with a mobile outfit in my car. The distance was about 12 miles. Thanks to the help of Fay Gehres we now have a calibra- ted wave meter for the 420 mc band. We will be glad to make skeds with anyone on 420, 2 or 6 meters. Lets get those 645's going this winter. Local 2 meter stations are keeping schedules at 7 pm each evening. Report in if you like, or call for a schedule. 73.

At Next meeting bring a 50 ¢ gift for exchange. Have wife or girl friend bring 50¢ gift for exchange by the ladies. Each member will get a gift from Santa. Santa Clause will be at the meeting, so bring the kiddies. This is the annual Christmas party. Merry Xmas

"CAMPUS CHATTER"

By O. Earle Toole, W9NZK.

There's nothing like electronics when it comes to a rapid count..... just ask the boys out at W9NVN, College Electronics Club. With W9DFD supervising, W9DDV is building the Physics Dept a Deluxe model Geiger Muller radiation and cosmic counter. Lesser models of this gadget retail at figures above a half grand, and its full of integrating, scaling, coincidence, and flip-flop circuits. Prof Sears, W9DFD, might be prevailed upon to do a little cosmic ray counting at some future meeting. W9LOL is representing Princeton in the Individual Naval Reservist Emergency Net, and bidding for a police radio job. (See cartoon, lower right, Ed).

"LETTERS TO THE EDITOR"

2021 E Frankling St
Evansville, Indiana
15 November 1948.

Editor TS,

OK on the WAE contest. It's a good idea. Good way to start with WA awards is to start at home. But about the five fone contacts, or such. You know how much a class B modulator cost? Why not make it, worked all Club Members?, instead of just those who live in Evansville? We have several out-of-town members also. 73.
Sig/ Charlie Greene.

"STATION ACTIVITIES"

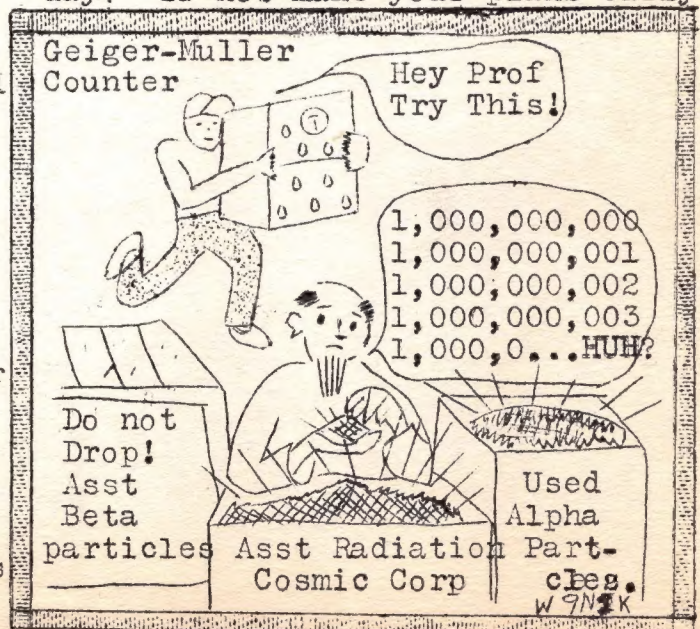
By Vic Chamberlain, W9BBC.

W9AZU is now back on the air and has a 3 element beam using inductive coupling-remote controlled selsyn indicated. W9FJI is in the middle of building a new 3 element wide spaced beam. The Mayor of Griffin, 9GWL is now back on ten meters. "More Phone Space" Covert, newly elected state president of Police Radio Officers, raised his antenna to try and overcome the higher power fone boys on ten meter

W9JUJ is now back in the Navy. Guess that by now you have heard 9KMI has broadcast station. Joe, W9LQE visited Evansville lately. W9MIO is now on 40 meter mobile. W9TBU has moved to new QTH and has new Jr Op. He is also using NBFM W9NKD QSY'ed to Chicago with CAA.

W9UIA back on ten, and has new daughter. W9WBW has very good results using phase modulations. W9EJS on ten. W9EHU on ten pp TZ40s using cathode modulation. W40GB has new beam and fixed station on ten. W9FLU has a new 3 element beam and is looking for contacts with Evansville. W9BBC got new country ZC6XY in Palestine. W9BAX on regular 40 meters now. W9GFO on 80 cw. W9CVN has new break-in system. W9HQF working DK on 20 cw. W9UMS still building that kw. W9QLW and W9DGA to attempt BPL during Jan. W9QLW plans rebuilding operation. Also going to lose one leg of his 14 db gain V beam.

(That will bring him down to my level -Ed.) W8YML, Jack Dumont in Cincinnati on 40 cw passes regards to Red Farhlinder. W9QLW didn't work as many hours in the last CD contest as he would of liked to. One reason was that he visited his parents who that Sunday were celebrating their 50th wedding anniversary. To get to the point, QDW was working 9NZZ in Peru, Ind after the CD and John and Carty were comparing CD results. 9NZZ mentioned that he didn't get to work the CD as much as he wished due to parents QRM wedding anniversary, a quick break brought forth the answer that, "Yes it was their 50th anniversary also----- quite a coincidence. DGA planning 304TL Kw final to catch up with 9QLW's countries confirmed. 9NZK on 40 cw. Are you ready for field day? If not make your plans early.



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1321 South Governor Street,
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Next Meeting

29 December 1948

Y M C A

Amateur Radio Station